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ABSTRACT

Most previous research on the social organization of schools neglects to consider that such organization may vary depending on several factors, including size, staff composition, and environment. This study utilized two images of school identified by Corwin: the rational bureaucracy (formally organized social structure in which activities have clearly defined patterns and are closely related to goals) and the natural system (social structure in which individual actions are not clearly related to organization goals, and there is little interdependence or centralized control). Data were collected from 13 elementary, junior high, and high schools by a questionnaire returned by 638 nonadministrative professionals. Three characteristics were identified that distinguish between rational bureaucracies and natural systems: goal consensus, centralization of control, and extent of coordination. Contrary to expectation, elementary schools correspond best to the rational bureaucratic image, and high schools conform more to the natural systems image, with junior high schools in between. Further analysis suggested that the rational bureaucracy also correlates with small school or district size, a predominantly female, less educated staff, with high turnover, and substantial central office influence. (JM)

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IMAGES OF THE SCHOOL: AN EXPLORATION OF THE SOCIAL ORGANIZATION OF ELEMENTARY, JUNIOR HIGH, AND HIGH SCHOOLS

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ABSTRACT

An important task for research on educational systems and educational change is to identify available images of social organizations and use them to order the diverse array of variables that can be used to describe schools as collectivities. Research for Better Schools' Field Studies unit is currently conducting research which identifies potential images of schools as formal organizations, assesses the extent to which particular schools correspond to different images, and specifies the conditions under which schools are most likely to correspond to different images. This report is a first attempt to refine and apply images of schools in order to better understand the change process.

Following Corwin (1974), two images of schools are identified: the rational bureaucracy and the natural system. A bureaucracy is a formally organized social structure with clearly defined patterns of activities in which, ideally, every series of actions is functionally related to the goals of the organization. Rationality comes from interdependence of the system's parts, effective coordination, and firm control by enlightened administrators. By contrast, in the natural system actions are not clearly related to goals. In fact, individual interests may substitute for goals as the primary motivating force. Interdependence will be reduced, and control will be dispersed.

Most previous conceptualizations have been limited by the use of single images of schools; yet existing research suggests that the social organization of schools may vary as a function of a number of factors including size, staff composition, student body composition, and environment. One possible

source of variation that has been systematically ignored is school level. While sociological research on other organizations suggests that high schools might be expected to correspond more to the rational bureaucratic image than elementary schools, most studies of schools have been limited to one level.

To examine the extent to which schools correspond to different images, data were collected from 13 elementary, junior high, and high schools working with RBS. These schools were not selected randomly, but they varied remarkably on a number of demographic variables. The primary data source was a Professional Staff Questionnaire administered to all non-administrative professionals in the 13 schools. A total of 638 usable questionnaires were returned for an overall response rate of 76 percent.

The analysis identifies three conceptual domains useful for distinguishing between the rational bureaucracy and the natural system. These are goal consensus, centralization of control, and the extent of coordination. Two dimensions are operationalized for each domain, and the two images are treated as endpoints of the six dimensions. This approach identifies substantial differences between school levels. However, contrary to expectation, the elementary schools correspond best to the rational bureaucratic image, and the high schools conform more to the natural systems image. Junior high schools are somewhere in between. Further analysis suggests that the following conditions are also associated with the rational bureaucracy: small school size; small district size; a staff that is predominantly female, has not received extensive professional education, and is subject to high turnover; and a central office that has substantial influence over decisions made in or about the school.

This research is necessarily exploratory. Based on a review of this effort and existing research, criteria for research designs that will advance examination of different images of schools are identified.

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CHAPTER I

INTRODUCTION

In a recent review, Corwin (1974) suggests that an important task for research on educational systems is to identify available models of social organization and use them to order the diverse array of variables that can be used to describe schools as collectivities. We agree and believe that such a synthesis activity can make an important contribution to the study of educational change, for recent studies--using both survey and case study approaches--have indicated that school characteristics have important impacts on efforts to promote change (Berman and McLaughlin, 1977; Firestone, forthcoming; Rosenblum and Louis, 1979). Thus the use of models or coherent images of schools should enhance an understanding of what the critical organizational properties of schools are and how they combine to shape the change process.*

The Field Studies unit of Research for Better Schools, Inc. (RBS) is currently conducting a study of educational change in 13 schools that are working with RBS to improve their educational programs in three areas--basic skills, citizen education and career preparation. As a part of that work, we are exploring potential images of schools as formal organizations, assessing the extent to which particular schools correspond to different images, and specifying the conditions under which schools are most likely to correspond to one image or another. This report represents our first

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* We prefer the term "images" to "models" because it denotes better the informality, on the part of both researchers and practitioners, of most of the conceptualization of schools as organizations. While it may eventually be possible to construct elaborate formal models, the present state of the art in this field suggests the need for a more informal stance.

attempt to refine and apply images of schools in order to be able to better understand that change process.*

In the remainder of this chapter we identify some of the ideas of others that have informed our endeavor and describe the context for our empirical work. Chapter II describes our efforts to operationalize two competing images of schools--that of the rational bureaucracy and that of the natural system--and to examine differences among elementary, junior and senior high schools in this respect. In Chapter III additional structural and environmental characteristics of schools which seem to correlate with these two images are presented and interpreted. Finally, in Chapter IV, we consider some of the limitations of our research and suggest ways in which those who desire a clearer understanding of schools as organizations might proceed.

The Rational Bureaucracy

The image of organizations that has most captured the thinking of both practitioners and researchers in education is that of the rational bureaucracy. A bureaucracy is a formally organized social structure with clearly defined patterns of activities in which, ideally, every series of actions is functionally related to the goals of the organization (Merton, 1968). Corwin (1974: 253) captures the flavor of this image by suggesting that "'Rationality' results from integration between means and ends, which is produced by interdependency and firm control by enlightened administrators."

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* A concurrent report focuses directly on the RBS school improvement effort in these 13 schools (See Firestone and Corbett, 1979).

The develcpment of the rational bureaucratic image has been motivated by attempts to understand what makes some organizations more efficient than others. Thompson (1977) describes three schools of thinking which contributed to this image. Each emphasized different mechanisms for linking organizational goals and activity. The scientific management school (e.g., Taylor, 1911) examined industrial settings where outputs were clearly measurable and goals (e.g., profit) were assumed to be known and clear. Time and motion studies were conducted and became the basis for planning according to a technical logic. Efficiency was found to increase with the setting of production standards. Questions of individual motivation were ignored. The administrative management school (e.g., Gulick & Urwick, 1937) focused on adjusting structural relations among production, personnel, supply, and other service units to increase efficiency. Efficiency was maximized by specializing tasks and grouping them in departments. Questions of span of control and delegation were important to this school. Goals in this case were also assumed to be known.

Studies of bureaucracy (e.g., Weber, 1947), the third school, also focused on organization structure. Structural variables included limits on the jurisdiction of office and the shape of the organizational hierarchy. Special attention was paid to impersonal control mechanisms like the number and content of rules that governed behavior. Through the use of rules and categories, according to this school, tasks became repetitive and efficiency was increased. Salary scales and patterns of career advancement were assumed to be adequate to motivate performance.

The rational bureaucratic image has guided the thinking of many educational policy makers and practitioners, often with poor results. Commenting on the early Teacher Corps, Corwin (1973) argues that organizations are often regarded by leaders of reform programs and persons who evaluate them as being more rational, potent instruments for implementing policy decisions than is in fact the case. While the development of such programs as the National Diffusion Network and the Research and Dissemination Utilization program at the federal level indicates some movement away from this thinking, it is still well established in many quarters. Consider, for example, New Jersey's program for providing a Thorough and Efficient (T&E) education to children which requires schools and districts to follow a six-step school-improvement process including goal development, establishing objectives, needs identification, developing and installing programs, evaluating educational program effectiveness, and budget review (State of New Jersey, Department of Education, 1976). The assumption behind this approach seems to be that legislation can make schools more like rational bureaucracies. The widespread interest in diffusing needs assessment, evaluation, and management by objectives throughout the nation's schools attests to the prevalence of rational bureaucratic thinking.

These examples do not mean that the nonrational parts of schools are necessarily being ignored by educational managers. Indeed, practitioners and change agents seem to devote a great deal of time to the maintenance of interpersonal relations and negotiation of important matters in ways that are not congruent with the rational bureaucratic image. But Tom Burns' (1961) comments about business seem to apply to schools. Aspects of

organization that do not fit with the rational bureaucratic image are only discussed "backstage" and covertly. The guiding assumption seems to be that if schools are not exactly rational bureaucracies, they are at least readily rationalizable.

Among researchers, the rational bureaucratic imagery has been used in at least three different ways. First, there has been a tendency to equate all formal organizations with rational bureaucracies on definitional grounds. Blau and Scott (1962), for example, defined formal organizations as social organizations (1) that are designed to achieve explicit goals, and (2) in which social arrangements--responsibilities, duties, and so forth--are intentionally designed to achieve these goals. Etzioni (1964), Caplow (1964), and others concurred. This kind of thinking led Gracey (1972) to conclude that since schools are organizations, they must be bureaucracies. Such a tendency was enhanced by a number of historical studies describing the bureaucratization of the formal structure of educational institutions in the last century (Callahan, 1962; Katz, 1971; Tyack, 1974).

Second, the image has been used to derive variables for study. For instance, a number of studies look at the impact of "bureaucratization" as measured in different ways on different aspects of the teacher's role. Moeller (1964) reported the use of an eight-item Guttman scale of bureaucratization of school districts which included the existence of a uniform course of study, communication through established channels, uniform hiring and dismissing procedures, secure tenure for nonteaching personnel, explicit statements of school policies, clearly delimited areas of responsibility, specified lines of authority, and standard salary policies for new teachers.

He found that, contrary to expectation, bureaucratization increased teachers' sense of power apparently by making their world more predictable and clarifying channels of communication and influence.

In another study, Anderson (1968) suggested that rule enforcement is at the core of the Weberian concept of bureaucracy. His measure of rule enforcement had a modest negative relationship with authority relationship, suggesting that rules depersonalize authority and make it more palatable. He found no association between rule enforcement and resistance to change.

Corwin (1970) operationalized two concepts related to bureaucracy. His measure of standardization consisted of fifteen questions related to teacher discretion permitted in lesson plans, textbook selection, and textbook use. Another measure examined the extent to which rules existed and were enforced. Neither measure was associated with scales of professionalism, defined in terms of interactions with students and colleagues, beliefs that competence is based on knowledge, and beliefs that teachers should have extensive decision-making authority. In contrast to Anderson, Corwin found that both standardization and rule enforcement increase conflict in a school.

The third empirical use of the rational bureaucratic image is as an ideal type. Researchers comparing schools against this type, note discrepancies, and in the process learn a great deal about the organization of schools. However, it may be that the usefulness of this activity has been exhausted, for as Corwin (forthcoming) notes, "Writer after writer seems to believe that everyone <u>else</u> assumes that organizations are actually coordinated rationally in accordance with Weber's ideal type bureaucracy...

Why are we all so ready to set everyone else straight on the score?" One reason may be the absence of alternative images that possess the coherence, power, and attractiveness of that for the rational bureaucracy.

Emerging Alternatives to the Rational Bureaucratic Image

In moving away from the rational bureaucratic image, researchers have employed two approaches. They have identified generic properties of schools without attempting to integrate them, and they have attempted to formulate new, coherent images of schools that differ from the rational bureaucracy. One of the most important examinations of generic properties was done by Lortie (1969) who emphasizes the substantial informal autonomy of teachers in the typical school district. He attributes this autonomy to a number of factors. One is the conflicting values to which public schools must respond--a condition that leads to the formulation of vague and often trivial goals in order to maintain consensus. A second is the limited ability of administrators to observe teachers due to the isolation of the classroom within the school and the school from the central office. A third is that formal superiors do not control rewards that are meaningful to teachers. Teachers' autonomy is selective, however. Lortie suggests that teachers have more control over in-class instructional matters and less over those related to record keeping and administrative activities.

Sieber (1975) identifies four characteristics of schools. First, because education is a decentralized function, schools are vulnerable to varying demands from the public. Second, teaching is a quasi-professional activity since teachers perform an important service, but they do not possess a high degree of competence or enjoy substantial autonomy (note

the apparent disagreement with Lortie here). Third, schools suffer from diffuse goals, partly as a result of their vulnerability. Finally, the formal control and coordination mechanisms of schools and districts emphasize the uniform treatment of students and the processing of youth as cohorts rather than as individuals.

There seems to be consensus in these depictions on some points -- e.g., the vagueness of the goals of schools and districts. On others, such as the distribution of control, there is some disagreement, but a rather sophisticated and fine grained analysis is developing. However, until recently, these examinations of generic properties have not led to the formulation of alternative images to the rational bureaucracy.

One recent attempt to develop such an alternative image is the "loosely coupled systems" view (Cohen, March, and Olsen, 1972; Meyer and Rowan, 1978; Weick, 1976). This image suggests that, in schools, goals have limited importance for guiding internal activity. Rather, their value is symbolic, as a way of satisfying the multitude of publics that impinge on the school. This view emphasizes the autonomy of the individual actor in the system and the absence of centralized control of behavior, especially with regard to instruction. Many of the differences between the loosely coupled systems view and that of schools as a rational bureaucracy are accounted for by suggesting that schools are not driven so much by a search for efficiency as by a search for external legitimation and support. Other differences come from highlighting the cognitive limits to rationality, which create barriers to conducting the kinds of analyses leading to action required by the rational bureaucracy.

Another emerging image is the "political systems" view which has been applied more to universities and other nonprofit organizations than to public schools (Baldridge, 1971; Zald, 1970). This image substitutes individual and group interests--stemming from such diverse sources as individual ambition, occupational socialization, and even position descriptions--for overall organizational goals. It suggests that sources of formal control must compete with informal influence resulting from individual skills and task-based dependencies. The result is not so much one of individual autonomy as of constant negotiation which occasionally breaks into open conflict when competing interests cannot be reconciled.

Interschool Variation in Organizational Behavior

Whatever the advantages of various images of schools, they share one major liability--the failure to take into account variation among schools. Although the similarities among schools may stand out when they are compared with such other organizations as hospitals, businesses, government agencies, the variation cannot be ignored.

The studies that have derived organizational measures from the rational bureaucratic image have found important variation among schools that relate to a number of structural, environmental, and staff characteristics. Corwin (1970), for instance, found that his measure of standardization was positively associated with a school's size, the complexity of its organization, and the number of levels in its hierarchy. Rule enforcement was associated with complexity and levels in the hierarchy. Anderson (1968) found that his measure of rule enforcement was associated with the sex distribution of a faculty (predominantly male departments were subject to

fewer rules), teachers' experience (experienced teachers were subject to fewer rules), and student socioeconomic status (there were more rules in schools with a lower class clientele). Interestingly, although organizational size is considered a major factor leading to bureaucratization (Blau and Scott, 1962), it was not important in either of these studies.

More recently, Firestone and Herriott (forthcoming) sought to apply three images--rational bureaucracy, political system, and loosely coupled system--to one school district. They suggest that as financial resources become scarce, as the need for cooperation among staff increases, and as assumptions about competence of staff which are usually applied generically are questioned, there is a move from organizational behavior associated with the loose coupling image to that associated with the political systems image. Hence, different images seem to be most revealing about schools as organizations depending on historical circumstances.

Interestingly, very little attention has been paid to organizational differences among elementary, junior high, and senior high schools. High schools are more complex, have a more differentiated hierarchy of positions, and more clients (i.e., pupils) than elementary schools. Since high schools have larger catchment areas, their clientele is more heterogeneous. They might require more explicit rules for pupil processing as a result. Previous research on other kinds of organizations suggests that because of these characteristics, high schools should be more bureaucratic than elementary schools (Blau, 1974). On the other hand, if Anderson's findings apply generally, the prevalence of males at the secondary level would mitigate against bureaucratization.

Typically, however, the possibility of structural differences among schools at different levels is acknowledged but not explored. This possibility is usually precluded by a study design which concentrates on a single level. Corwin (1970) examined only high schools. Anderson (1968) looked at only junior highs. Most of the research providing data to support the loose coupling image comes from studies of only elementary schools (Lortie, 1969; Meyer et al., 1978) although a recent study contributing to this strand of thinking concentrated exclusively on high schools (Abramowitz and Tenenbaum, 1978).

Another way to cope with school-level variation has been to conduct parallel studies at two or more levels, using the different levels as replications. Here the major interest in school level, however, is to see if the same relationships hold at different levels. Thus school level is considered epiphenomenal. Such a strategy was employed by Herriott and Hodgkins (1973) in a study of the impact of a school's sociocultural environment on its organizational properties and by Beck and Betz (1975) in a study of the antecedents of organizational conflict. The only studies that focus on comparisons across grade levels are in the field of planned change, and have concluded that elementary schools are more amenable to change than secondary schools (Berman and McLaughlin, 1977; Rosenblum and Louis, 1979). However, their analyses do not explore what differences among schools explain the apparent rigidity of secondary schools.

How should one cope with the problem of variation among schools in constructing images, and what contribution can be made to understanding the differences among schools at different grade levels? Corwin (1974) suggests that it is a mistake to look for a single generic image or model. Rather models ought to be treated as endpoints on a series of

conceptually important continua. Following Gouldner (1959), he contrasts the rational bureaucracy with the natural systems image--one that contains many of the properties of the loosely coupled and political systems views. He suggests that the two images should be viewed as extreme points on dimensions having to do with goal consensus, functional interdependence, distribution of power, and extent of internal coordination.

One implication of this line of reasoning is the need for research on schools to conceptualize and measure variables that should distinguish between rational bureaucracies and natural systems. In this way a determination can be made whether such variables correlate in ways indicative of a single continuum, and other characteristics of schools that lead them to conform more to one image or the other can be identified. Such a research effort clearly ought to focus on differences among elementary, junior high and senior high schools.

The remainder of this report begins to address such issues. However, before turning to the conceptualization and operationalization of organizational variables we wish to introduce the larger context of our research.

The Research Context

Typically, research and development organizations have viewed development activities as distinct from and subsequent to the research on which they are based. That research which is conducted usually provides only the substance for the development work, not an illumination of the contexts in which the products will be used. In contrast to this traditional association of research and development, RBS is attempting to forge a new, symbiotic relationship which emphasizes examining the use in schools of materials

and ideas resulting from development work. This research uses the development activities themselves as an arena for inquiry. In the 1978-79 school year, RBS had three components developing approaches to school improvement that external assistance agencies could use to help schools refine their programs in the areas of basic skills instruction, career preparation, and citizen education. A fourth component, Field Studies, was charged with examining the change processes that took place when school and RBS component came together. RBS expected that the results of Field Studies' work would be useful to its school improvement efforts as well as to the broader community of research users.

In the fall of 1978 and winter of 1979, the three development components established relationships with 13 schools in 11 districts--three schools constituted all of the elementary and junior high facilities in one rural district. Essentially, the schools agreed to try out the approaches the components were developing with the expectation that the schools would profit with improved programs while RBS would have the opportunity to use and refine its products (Firestone, 1979). Field Studies followed the components into these schools. In the initial sessions to negotiate entry to the site, the research team indicated that its work would constitute part of the relationship with RBS. The researchers asked to attend meetings between each school and the RBS components to which it was linked in order to observe and document the change process, to conduct interviews, and to administer a questionnaire to learn more about the organization of the schools.*

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* A separate report based on participant observation data describes the change process. See Firestone and Corbett (1979).

The context in which this research took place determined the selection of schools. The scope of the components' development activities limited the size of our sample to 13 schools, and components' selection procedures ensured that it would not be random. Still, the selection procedure did yield a remarkably varied set of schools (see Table 1-1). The inclusion of four elementary schools, six junior high and middle schools, and three senior high schools at different grade levels. However, the components' selection criteria confounded this comparison somewhat since for the most part the Basic Skills Component worked with elementary schools, Citizen Education worked with junior high schools, and Career Preparation worked with senior high schools.

The 13 schools varied considerably in size; the two smallest schools had fewer than 400 students while the largest had over 3000. Seven of the schools had 700 or more students. District size also varied substantially; the smallest district in which one of these 13 schools was located had approximately 1600 students while the largest--in one of the nation's major cities had over 200,000. Five districts had fewer than 5000 students. The community setting of the schools also differed; two were in large cities with a population over 100,000, four were in small cities with a population between 40,000 and 60,000, three were suburban, and four were rural.

The research utility of many development efforts has been limited by their location in "ideal" settings such as middle-class schools with a well-trained teaching corps, thereby not encountering the real-life problems that the schools most in need of improvement face. The RBS components

TABLE I-1

SCHOOL DEMOGRAPHIC DATA

Variable	Grade Level: Elementary School				Junior High						High School		
			Rural District										
	Washington	Middleburg	Southend	Smalltown Elementary	Smalltown Middle	Urban	Farm Center	M.L. King	Suburb	Green Hills	Neighbortown	Bigtown	Oldtown
Grade Levels	K-4	K-6	K-4	1-6	6-8	7-9	7-9	6-8	7-9	6-9	9-12	9-12	9-11
RBS Component Selecting School[a]	BSC	BSC	BSC	BSC	BSC	CEC	CEC	CEC	CEC	CPC	CPC	CPC	CPC
Total Enrollment	390	677	375	628	575	1485	676	921	830	726	799	2654	3146
Percent of Students Whose Father Completed College[b]	1	15	5	5	5	3	3	3	21	60	7	15	20
Percent of Minority Students	95%	11%	20%	32.5%	20.5%	61%	19%	96%	2%	8%	0%	52%	55%
Percent of Students 1 Year Behind in Reading[b]	75%	35%	21%	17%	25%	70%	75%	90%	20%	5-10%	20%	46%	60%
Percent of New Students (Transfers In)	15%	9%	5%	16%	10%	13%	18%	10%	11%	7%	2%	4%	13%
Total No. of Full-Time Staff	27	38	20	43	42	101	53	79	58	51	58	182	172
No. of Classroom Teachers[c]	18	31	13	35	38	77	43	63	49	45	49	150	141
No. of Aides & Para-Professionals[c]	3	4	6	6	0	17	6	10	2	0	3	12	8
Percent of Professional Staff on Discretionary Funds[c]	11%	0%	15%	0%	13%	15%	1%	1%	4%	0%	1%	6%	3%
Percent of Aides/Para-Professionals on Discretionary Funds[c]	0%	0%	33%	100%	(NA)	7%	17%	100%	100%	0%	100%	25%	8%
Percent of Teachers in the First Year in School[d]	4%	16%	10%	12%	19%	13%	6%	3%	9%	4%	5%	1%	6%
Percent of Staff with MA[d]	29%	63%	0%	5%	10%	52%	19%	13%	22%	39%	38%	32%	37%
Graphic Location	SMALL CITY	SUB	RURAL			BIG CITY	SMALL CITY	BIG CITY	SUB	SUB	RURAL	SMALL	SMALL CITY
Total District Enrollment	4858	10881		2437		230,000+	10985	20428	1605	4549	2800	8586	8233
Percent of Decline in Enrollment[b] (1975-1978) (to nearest 5%)	20%	30%		0%		15%	10%	5%	0%	20%	0%	5%	5%

[a]BSC = Basic Skills Component
CEC = Citizen Education Component
CPC = Career Preparation Component

[b]Based on Principal Estimates.

[c]Full-Time Equivalents. Part-Time Staff are treated as half-time.

[d]Based on Full-Time Staff.

were not afraid to select what might be expected to be difficult sites. For instance, based on principals' estimates, the proportion of students one year or more behind grade level in reading ranged from 5 to 90 percent. In five schools, 60 percent or more of the students were believed to be one year or more behind in reading. Minority enrollment varied from a low of 2 to a high of 85 percent, with five schools having a 50 percent or more minority student clientele. Socioeconomic background was somewhat more uniform. Principals estimated that the proportion of students whose fathers had a college education varied from 1 percent or one person to 60 percent, but in seven schools 5 percent of the fathers or fewer had completed college. Nor were the faculties of these schools especially well educated. While the proportion of teachers with masters degrees varied from none to 63 percent, in eight schools fewer than 30 percent had completed an advanced degree.

In sum, although the process through which these 13 schools were selected was not a random one, the schools vary considerably on a number of demographic characteristics that one might expect to be associated with different patterns of internal organization and provide a useful opportunity to explore issues of organizational structure.

In the Spring of 1979, a Professional Staff Questionnaire designed to obtain information on variables that differentiate between rational bureaucracies and natural systems was completed by classroom teachers and other nonadministrative professional staff members at each school. In general, the questionnaire treated respondents as informants about their schools; most questions were designed to elicit information about the school as an organization rather than about the characteristics of its members. A total

of 838 questionnaires were delivered to the schools for distribution. Questionnaires were anonymous. This anonymity and ongoing development work precluded follow ups of nonrespondents. Still, 638 were subsequently returned in usable form--for an overall response rate of 76 percent.* These questionnaires provide the basis for our exploration of images which follows.

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*The complete questionnaire is reproduced in Appendix B. More detailed data on response rates are found in Appendix A (Table A-1).

CHAPTER II

CONCEPTUALIZING AND OPERATIONALIZING THE RATIONAL-NATURAL DISTINCTION

The first task we faced in our effort to better understand schools as organizations was to see if it is possible to operationalize a distinction between the two images of schools introduced in Chapter I--that of the rational bureaucracy and of the natural system. We then wanted to identify important differences among elementary, junior high, and senior high schools in the degree to which they correspond to the two images.

Corwin (1974) identifies six domains* of organizations derivative from past research which can be used to distinguish between the two images: concensus on values, norms, and goals; functional interdependence among parts of the organization; reciprocity in exchange; centralized power; expertise; and coordinated planning. However, each of these organizational domains is itself multi-dimensional. Thus. for this exploratory effort at spanning the "ladder of abstraction" from domains to dimensions to empirical indicators, it seemed appropriate to concentrate upon a limited number of domains and a limited number of dimensions within each domain. To simplify our task, we elected to concentrate on three domains--which we call goal consensus, control, and coordination--and to explore two dimensions within each (see Table II-1). The next three sections consider how we conceptualized and measured each domain (and its two dimensions) and what we learned when we examined differences on each dimension across the three school levels. A fourth section summarizes our findings regarding the association of school level and image.

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*Corwin's term is "component" rather than "domain." However, we have elected to use the latter when considering schools at a conceptual level in order to reserve the former for the operational level.

TABLE II-1

ASSUMPTIONS REGARDING THE RELATIONSHIP
OF DOMAINS, DIMENSIONS AND IMAGES

Domain	Dimension	Assumption by Image	
		Rational Bureaucracy	Natural System
1. Goal Consensus	1. Product Goals	High Consensus	Low Consensus
	2. System Goals	High Consensus	Low Consensus
2. Control	1. Enforcement of Formal Rules	High Enforcement	Low Enforcement
	2. Absence of Teacher Autonomy	High Absence	Low Absence
3. Coordination	1. Formal Discussion	High Discussion	Low Discussion
	2. Implemented Decisions	High Implementation	Low Implementation

Goals

Goals are the ends toward which an organization's activities are directed. Goals are central to the rational bureaucratic image. As noted in Chapter I, bureaucracies are collectivities structured to achieve a specific set of goals. Moreover, within schools typical definitions of rational planning for change programs focus on identifying school goals, detecting discrepancies between goals and actual performance, and selecting alternatives intended to reduce those discrepancies (Firestone and Herriott, forthcoming). While the concept of organizational goals is inherently clear, goals are frequently difficult to measure (Perrow, 1972), especially in schools (Miles, 1975).

One way to approach the study of organizational goals is to look at the degree of consensus on the importance of different goals. Presumably, in the rational bureaucracy the staff is working towards one clearly defined set of goals, understands what those goals are, and accepts them, at least to the extent of taking them as guides for action. In the natural system, however, individual interests would be more important. In addition to "selfish" interests related to increased salary and prestige and rapid career advancement, these interests might stem from occupational training or special assignment within the organization (Simon, 1964). Hence, math teachers, art teachers, school psychologists, and assistant principals in charge of maintaining discipline may all have specific goals as a result of their job that they see as the most important objective for the whole

school. These individual interests would create considerable dissensus on goals.

The study of goals is complicated by the variety of types of goals a school might have. Perrow (1972) distinguishes five different types of goals. Two of these--product goals and system goals--seem particularly relevant to a study of schools. Product goals refer to the characteristics of an organization's outputs--i.e., its students. These might include achievement of specific literacy levels or a given sophistication in understanding differences among careers. System goals refer to the state of the organization. They include growth, staff morale, and innovation as an end in itself. The rational bureaucracy stresses product goals; the natural systems view stresses system goals. For example, Michels (1961) indicates that as organizations become larger and more successful, continued survival (a system goal) becomes an end in itself and more important than creating any given product.

Consideration of system goals in conjunction with product goals creates a conceptual problem. There seems to be a tension between product and system goals. However, it can be argued that while the rational bureaucracy emphasizes product goals, there is a clear understanding of what system goals are necessary as means to achieve desired outcomes. From such a perspective, one would expect to find consensus on both product and system goals. Since system goals seemed important, but their relationship to the rational-natural distinction is not entirely clear, we decided to measure both and see what relations appeared empirically.

The Importance of Particular Goals

Our procedure was to ask professional staff members to select from a list of possible goals the three "that are most important to you as a member of this school." Separate questions were asked about twelve product and ten system goals. (The actual items are found in Appendix B Questions 2 & 3.) We will first examine the importance of different goals across schools at different levels and then discuss the transformation of importance scores to consensus scores and the patterns of consensus that emerge.

Table II-2 shows the percent of the professional staff members in the average school who selected each of the twelve product goals as being important. There is considerable variation in the importance attached to the different goals, with one that is generally considered to be very important and several that are unimportant. Respondents in the average school most consistently attach importance to basic skills (89.5 percent of the professional staff in the average school indicated that this product goal was one of the three most important). Then there is a considerable jump to the second and third most important--self-esteen (58.2 percent) and respect for authority (54.5 percent). Half the list of potential product goals from health and environment through science and technology. is considered important by less than 10 percent of the respondents.

One issue that has not received adequate attention in past research is an examination of the extent to which different types of schools--elementary, junior high, or senior high schools--vary in their organizational properties. Table II-2 throws some light on this issue by showing the

Table II-2

Percent of Professional Staff Members in the Average School Attaching Importance to Each of Twelve Product Goals, by School Level

PRODUCT GOAL*	SCHOOL LEVEL			All Schools
	Elementary	Junior High	Senior High	
1. Basic Skills (Reading and math)	98.3	88.5	80.0	89.5
2. Respect for Authority (discipline, character building)	55.8	60.5	41.0	54.5
3. Self-esteem (self-concept)	77.8	42.5	42.0	53.2
4. Understanding Others (cultural pluralism, getting along with others)	24.8	33.3	26.3	29.1
5. Critical and Original Thinking	13.3	26.7	31.7	23.2
6. Work (Understanding the world of work, career education)	4.3	17.0	26.0	15.2
7. Health and Environment	12.3	4.5	7.0	7.5
8. Arts and Humanities	5.3	6.8	7.7	6.5
9. Vocational Education	0.8	7.3	8.7	5.6
10. Family Living	6.3	3.2	8.0	5.2
11. Citizenship Education	1.0	7.2	4.0	4.5
12. Science and Technology	0.0	2.2	8.0	2.8
Number of Schools	4	6	3	13

* The twelve goals have been listed in decreasing order on the percent of respondents in the average of all 13 schools who selected each goal as one of the three most important in their school.

average importance ratings for each school level separately. However, in reading the table the RBS components' school selection criteria must be kept in mind. The Basic Skills Component (BSC) selected four elementary schools and one junior high school. Citizen Education Component (CEC) selected four junior high schools, and Career Preparation (CPC) selected three senior high schools and one junior high school. Hence, four of the six junior high schools are working with CEC, and all the senior high and elementary schools are working with specific components. Since the schools were selected because people helping RBS with school selection expected that particular schools would be interested in the component's curricular area, the importance they attach to the various potential product goals might be affected accordingly.

Nevertheless, there are some interesting patterns. On the one hand the basic ordering of the importance of the various goals is quite similar for all levels. Basic skills is consistently the most important, and--with the exception of health and environment which is selected by 12.3 percent of the teachers in the average elementary school--the last six goals in Table II-2 are chosen by less than ten percent of the respondents at all three levels.

On the other hand, there are some important differences among levels when one examines individual goals. For instance, with two goals--Basic skills and Self-esteem--there is a decreasing, monotonic trend as one moves from elementary through junior high to senior high schools. The strong emphasis on basic skills in elementary schools could reflect the connection with RBS' Basic Skills Component, but it could also reflect work assignments--the

fact that elementary teachers typically teach all subjects to one class and devote most of their time to basic skills instruction. A third possibility is as children grow older, they are ready for a wider range of content material. Either of the latter interpretations would help explain why the trend of decreasing emphasis on basic skills continues into the high schools. The emphasis on self-esteem could reflect a belief of elementary teachers that younger students need to have their confidence build up as a prerequisite to learning the school's curriculum or as part of their early socialization to school.

With five goals--critical and original thinking, work, arts and humanities, vocational education, and science and technology--there is an increasing, monotonic trend as one moves up the school levels. These findings, along with the decreasing emphasis given to basic skills, suggests a pattern of stressing a wider variety of subject areas, more advanced cognitive functions, and more direct preparation for adult life when schools work with older students. Teachers' subject matter specialization in the upper grades could also contribute to this same pattern.

Finally, there was an inverted U-shaped pattern with the junior highs higher than either of the other two school levels with three goals--respect for authority, understanding others, and citizenship education. While all of these goals are related to the issues addressed by the Citizen Education Component, they could also reflect the specific difficulties that junior highs face when working with adolescent children.

To find out if variation in these indicater scores were an artifact of selection, we compared the average score of the four CEC junior high schools with that for the two junior high schools working with the other two components. If selection were the crucial factor in an inter-level differences, the CEC schools would score consistently higher. The two sets of schools virtually tied on respect for authority (60 percent for the CEC schools and 61 percent for the non-CEC schools). With respect to the two other potential goals--understanding others and citizenship education--the non-CEC schools actually gave their goals more importance on the average than the CEC schools (36 percent vs. 32 percent on the first and 12 percent vs. 5 percent on the second). While the number of schools involved in these comparisons is quite small, the indication is that there is something about junior highs that leads to a stress on goals related to authority and interpersonal relations.

Table II-3 shows the importance that professional staff attach to ten different system goals. Here too, there is considerable overall variation, but not the kind of bunching at the low end of our importance scale that took place with the product goals. Respondents seemed to agree on the supreme importance of one of the product goals (basic skills) and the relative unimportance of half the others; however, no system goal stands out in the same fashion. The most important goal in the average school, student discipline, is selected by only 73.7 percent. The second most important goal, teacher morale, is selected by 64.2 percent. Only one goal, cost reduction,

Table II-3

Percent of Professional Staff Members in the Average School Attaching Importance to Each of Ten Product Goals, by School Level

SYSTEM GOAL*	SCHOOL LEVEL			All Schools
	Elementary	Junior High	Senior High	
1. Student Discipline	66.3	80.5	70.0	73.7
2. Teacher Morale	61.0	65.5	66.0	64.2
3. Professional Development of Teachers	46.0	26.3	33.7	34.1
4. Community Relations	33.5	22.5	26.7	26.8
5. Innovation	24.3	19.2	25.7	22.2
6. Teacher Autonomy or Independence	16.8	26.0	19.0	21.5
7. Safety of Students	17.0	19.3	26.0	20.2
8. Integration of Students from Different Races or Backgrounds	12.0	21.2	16.3	17.2
9. Relations with the Central Office	6.0	12.8	10.3	10.2
10. Cost Reduction	1.5	1.8	1.7	1.7
Number of Schools	4	6	3	13

*The ten goals have been listed in decreasing order on the percent of respondents in the average of all 13 schools who selected each goal as one of the three most important in their school.

is selected by less than ten percent of the respondents. Half the goals are rated as important by from 20 to 35 percent of the respondents.

An examination of the differences among school levels shows few of the monotonic trends that were found among product goals. The only one is a rising pattern of importance moving from the elementary to the senior high level for safety of students. However, three goals show the inverted-U shaped patterns: student discipline, integration, and teacher autonomy.

The emphasis on teacher autonomy seems unique to one specific junior high. In twelve schools, no more than 25 percent of the respondents consider teacher autonomy important while in that school 67 percent do. (See Appendix A, Table A-3, for school-by-school details.) When that school is excluded from the analysis, there are no differences among the levels. The other two system goals fit the pattern established with product goals for junior highs--the emphasis on authority and interpersonal relations--but they could also reflect the Citizen Education Component's selection procedures. Here when the CEC and non-CEC schools are compared, the CEC schools give greater importance to student discipline (82.5 vs. 76.5) but less to student integration (17.8 vs. 28). While not clear, the impact of selection is not overwhelming.

Goal Consensus

Although a knowledge of what goals are considered to be most important by schools at each of the three levels is helpful in understanding schools

as social organizations, the distinction between rational bureaucracies and natural systems presented in Chapter I hinges on goal consensus rather than importance. Since consensus can be achieved both when there is agreement that a particular goal is important and when there is agreement that it is unimportant, we desired a measure of consensus that would focus on the degree of agreement among teachers independent of what they were agreeing about or the direction of agreement. To obtain such consensus scores for each potential goal within each school we assumed that a situation in which 50 percent of the respondents within a given school indicated a particular goal to be important--and thus 50 percent failed to so indicate--represented the lowest degree of agreement possible within the data available to us. Such a school was given to consensus score of zero. Consistent with this logic a situation in which either all of the teachers within a given school said that a particular goal was important or all failed to say that it was important was considered to represent the highest degree of consensus. Such schools were given a score of 100. Schools exhibiting other than extreme dissensus (a score of 0) or extreme consensus (a score of 100) were located at intermediate points along this consensus scale using a scoring procedure described in Appendix A. (School-by-school consensus scores for each of the 12 product and 10 system goals are also presented in Appendix A. See Tables A-3 and A-5.)

Table II-4 presents the resulting consensus scores for product goals by school level. The ordering of goal consensus is very different from

Table II-4

Degree of consensus on Each of Twelve
Product Goals in the Average School, by School Level

PRODUCT GOAL	SCHOOL LEVEL			All Schools
	Elementary	Junior High	Senior High	
1. Science and Technology	100.0*	95.7	84.0	94.3
2. Citizenship Education	98.0*	85.7	92.0	90.9
3. Family Living	87.5	93.7*	84.0	89.5
4. Vocational Education	98.5*	85.3	82.7	88.8
5. Arts and Humanities	89.5*	86.3	84.7	86.9
6. Health and Environment	75.5	91.0*	86.0	85.1
7. Basic Skills (reading and math)	96.5*	77.0	60.0	79.1
8. Work (understanding the world of work, career education)	91.5*	66.0	48.0	69.7
9. Critical and Original Thinking	73.5*	48.7	36.7	58.5
10. Understanding Others (cultural pluralism, getting along with others)	50.5*	37.3	47.3	48.7
11. Self-esteem (self-concept)	55.5	17.7	16.0	28.5
12. Respect for Authority (discipline, character building)	18.5	25.0*	18.0	21.4
Average Consensus	77.9	67.5	61.6	70.2

*For each goal indicates the highest concensus score across the 3 school levels.

that for goal importance (compare Tables II-2 and II-4) and indicates that it is easier for teachers to agree on what is not important than on what is important. The first six goals on the table of consensus scores are in exactly the reverse order of the last six goals in importance. Basic skills, the goal ranked first in importance, is seventh in consensus, although it is not far behind the six most "unimportant" goals. Self-esteem and respect for authority--the goals ranked second and third in importance--are ranked eleventh and twelfth in terms of consensus. This pattern highlights the general difficulty mentioned above in determining what schools should do. If goals are often ambiguous, it seems to be because the staff cannot agree on what a school's purposes are.

The asterisks in the body of Table II-4 indicate the school level for which there is the greatest consensus regarding the importance of each of the 12 product goals. By summing these asterisks down each column it is readily apparent that in general consensus regarding product goals is greatest in elementary schools (9 of the highest consensus scores are found at that level), second greatest in junior high schools (3 scores) and lowest in senior high schools (no scores).

Although it would make little sense to average across the twelve importance scores within each school to obtain an overall measure of goal importance, it does make sense to average the twelve consensus scores. When this is done the 13 schools can be ranked as follows in terms of their overall degree of consensus on product goals.

Rank	School	Overall Consensus
13	Washington Elementary	81.2
12	Middleburg Elementary	80.8
11	Smalltown Elementary	75.8
10	Southend Elementary	73.8
9	Suburb Junior High	73.2
8	Farm Center Junior High	70.5
7	Smalltown Middle	70.2
6	Riverside Middle	67.8
5	Green Hills Junior High	63.2
4	Bigtown Senior High	62.6
3	Oldtown Senior High	62.3
1.5	Urban Junior High	59.8
1.5	Neighbortown Senior High	59.8

Because respondents could only indicate that three of the goals were of highest importance, overall consensus scores for product goals could range from only 50 to 100 (see Appendix A). Thus the fact that the scores range from a low of 59.8 to a high of 81.2 indicates substantial variation among them, with the elementary schools tending to exhibit the highest degree of consensus, the junior high/middle schools the next, and the senior high schools the lowest. (The actual average overall product goal consensus scores by school level are presented at the base of Table II-4).

Table II-5 presents results for system goals comparable to those presented in Table II-4 for product goals and suggests that the problem of achieving consensus in this organizational dimension is also severe. The potential goals for which there is the highest consensus are the three shown in Table II-3 to be least important. The goal which ranks highest in importance--student discipline--is only seventh in terms of consensus,

Table II-5

Degree of Consensus on Each of Ten
System Goals in the Average School, by School Level

SYSTEM GOAL	SCHOOL LEVEL			All Schools
	Elementary	Junior High	Senior High	
1. Cost Reduction	97.0*	96.3	96.7	96.6
2. Relations with the Central Office	88.0*	74.3	79.3	79.7
3. Integration of Students from Different Races or Backgrounds	76.0*	57.7	67.3	65.5
4. Teacher Autonomy or Independence	66.5*	59.3	62.0	62.2
5. Safety of Students	66.0*	61.3	48.0	59.7
6. Innovation	51.5	63.7*	48.7	56.5
7. Student Discipline	34.5	61.0*	40.0	48.0
8. Community Relations	33.0	55.0*	46.7	46.3
9. Professional Development of Teachers	21.0	47.3*	32.7	35.8
10. Teacher Morale	37.0	31.0	32.0	33.1
Overall Consensus	57.1	60.7	55.3	58.3

*For each goal indicates the highest consensus score across the 3 school levels.

while the goal for which there is the least consensus--teacher morale--is second in importance.

The data presented in Table II-5 also help clarify the issue of school-level differences in consensus on system goals. Although the pattern with respect to system goals is less pronounced here than it was for product goals, the greatest degree of consensus was found in elementary schools for six of the 10 potential goals--and five of these six were the goals for which there was the greatest consensus across all 13 schools. The junior high schools were found to be the locus of the greatest degree of consensus on only four goals and in no case was the greatest degree of consensus found within the senior high schools.

The overall scores for consensus on system goals (those obtained by averaging within each school across the ten indicators or consensus) are as follows:

Rank	School	Overall Consensus
13	Farm Center Junior High	71.2
12	Middleburg Elementary	62.8
11	Suburb Junior High	62.6
10	Green Hills Junior High	62.4
9	Washington Elementary	60.0
8	Oldtown Senior High	59.0
7	Smalltown Middle	56.6
6	Bigtown Senior High	56.4
5	Urban Junior High	56.0
4	Riverside Middle	55.6
3	Smalltown Elementary	53.4
2	Southend Elementary	52.0
1	Neighbortown Senior High	50.4

Because respondents could only indicate three of the goals as of greatest importance, the overall consensus scores for the system goals could range from only 33.3 to 100 (see Appendix A). Thus the fact that the observed scores range from a low of 90.4 to a high of 71.2 indicates less variation among the schools in the degree of their consensus on system goals than with respect to product goals. The picture with respect to school level differences is also less pronounced in the case of system goals. Although consensus is higher in the average elementary school than in the average senior high school--a finding consistent with what we observed with respect to product goals--the highest degree of consensus is found within the average junior high school (see bottom of Table II-5 for details).

Control

The control system of an organization is the set of mechanisms by which some members obtain the compliance of others. In the rational bureaucracy, control is monopolized by the formal structure and used to ensure that actions are taken to achieve goals. By contrast, in the natural system, control may be fragmented. There individual autonomy will be greater, not only to permit the use of individual initiative to achieve collective ends, but also to allow individuals to achieve personal or group objectives.

The distinction between the two images rests on two concepts--the means of control and the distribution of control. In examining the means, it is necessary to distinguish between formal and informal mechanisms. The formal control system consists of the policies, rules, and orders specifying conduct, as well as evaluation procedures, performance criteria,

means to obtain data on performance, and sanctions and rewards made available depending on performance (Dornbusch & Scott, 1975). While this system can be elaborate, the existence of consistently enforced rules is central (Anderson, 1968). In the rational bureaucracy, such rules are clear, well known, and enforced. They are an impersonal means of assuring that goals are met. In the natural system, there may be an "indulgency pattern" characterized by routine or selective non-enforcement (Gouldner, 1954). Such rule-bending can take place because the relationship between rules and goals is unclear, because the rule enforcer lacks adequate sanctions, or even because indulgency is used to increase the influence of the rule bender.

The formal control system is expected to promote centralization of control in the rational bureaucracy. Formal control can be reinforced or undercut by a number of other sources of influence including special individual skills or training, access to external resources, the esteem of others, or dependencies based on the organization of tasks. Whatever the sources of influence, control is centralized in the rational bureaucracy. Moreover, it rests within the chain of command. In a school, according to such an image, control rests with the principal rather than a clique of teachers, the teachers' association, or a parents group. In the natural system, control is more dispersed.

There is a related issue related to the zoning of control. Those who argue that the rational bureaucratic image is inapplicable to schools suggest that control ought to be strongest over those activities most directly related to achieving central goals which are taken to be instructional. However, they suggest that control is actually least centralized

in that area and most centralized with regard to administrative matters that have relatively little to do with the conduct of instruction (Lortie, 1969; Meyer and Rowan, 1978).

Rule Enforcement

To learn about the role of rules in the 13 schools, our staff informants were asked whether policies existed in each of seven areas, and if a policy existed the frequency with which it was enforced. Our measure of control through rules is the percent of informants in each school who said that a policy existed in a particular area and was "usually" enforced (See Appendix B, Question 1).

Table 11-6 presents the resulting "control through the enforcement of formal rules" scores for each of the seven policy areas both for all schools and for the three school levels separately. The overall impression derived from this table is that schools are not rule bound bureaucracies, at least for their staff members. Over all seven areas, less than half the informants report that rules exist and are enforced. Rules are most actively enforced in two areas--arrival and departure time; however, these rules have more to do with administrative form or good practice than the substance of instruction. As will be shown in the next section, teachers have a great deal of autonomy over what they put in their lesson plans and how they teach; the requirement is typically that the plans be filled out and available.

In Table 11-6 considerable variation in enforcement of rules related more directly to instruction and student behavior is apparent. For instance, only half the teachers report that rules on corporal punishment are

Table II-6

Degree of Control Through Formal Rules in the Average School in Seven Policy Areas, by School Level

POLICY AREA	SCHOOL LEVEL			All Schools
	Elementary	Junior High	Senior High	
1. Arrival and Departure Time for Teachers	81.0*	58.2	72.3	68.5
2. Lesson Plans	82.5*	60.5	61.3	67.5
3. Use of Corporal Punishment	60.8*	49.2	51.3	53.2
4. Parental Visitation	57.5*	41.7	39.0	45.9
5. Use of Curriculum Guides	45.6*	34.8	36.7	38.6
6. Textbook Selection	26.3	38.0*	34.3	33.5
7. Discussion of Controversial Topics in the Classroom	10.5	11.3*	9.0	10.5
Overall Rules Control Scores	52.0	42.0	43.4	45.4

*For each policy area, indicates the highest scale across the 3 school levels.

consistently enforced, suggesting that special factors having to do with the individual case are often taken into account. On the other hand, rules on the discussion of controversial topics either seldom exist, or if they do, are rarely enforced. Either teachers have great leeway in this area or some less formal means of control is employed.

In spite of this general pattern of nonexistent or inconsistent rule enforcement, there is considerable school-to-school variation. Averaging across all seven areas, school-specific overall rule enforcement scores range from a high of 58.1 to a low of 30.4 (see Appendix A, Table A-6 for details). Moreover, Table 11-6 suggests that elementary schools are considerably more rule-bound than junior or senior high schools. This pattern is quite general, appearing in five of the seven rule areas (note asterisks in Table 11-5). The only areas where junior highs score highest on rule enforcement pertain to textbook selection and discussion of controversial topics.

Absence of Teacher Autonomy

To examine the distribution of control regardless of the means employed, teachers were asked how much influence they have in 12 different decision areas. From their responses, an absence of teacher autonomy score was computed so high scores would indicate a rational bureaucracy (concentration of control above the teacher level) and low scores would indicate a natural system-like operation (dispersion of control among the staff). For each area our measure was the percent of informants in each school who said that individual teachers had either "no" influence or "minor" influence in that area (see Appendix B, Question 10).

Table II-7 presents the "control through the absence of teacher autonomy" scores for each decision area and compares schools at different levels. This comparison presents an opportunity to advance previous research because those who have argued most forcefully the position that teachers have considerable autonomy have relied on data limited to elementary schools (Lortie, 1969; Meyer and Rowan, 1978). Our data also suggests that teachers' autonomy is distinctly limited. Across all schools and items, the average absence of autonomy score is 67.6, distinctly in the direction of centralized control.

Perhaps more important, there seems to be a distinct pattern of zoning of control. In a few decision areas--such as hiring new teachers, renewing teacher contracts, and setting salary scales--individual teachers agree almost unanimously that they have limited influence. On the other hand they report almost total control over their daily activities and the contents of their lesson plans. This control of day-to-day activities within the classroom seems to be the basis for teachers' sense of autonomy, but in other areas influence is either shared or nonexistent. For instance, teachers may control the instructional activities that take place in a course, but they only share influence over what textbooks will be used for it (44.4 percent say they have minor influence or less) while others have the primary say over what courses will be given. Apparently, teachers have autonomy only within a structure that is either negotiated or imposed by others. (For a similar conclusion, see Corwin, 1974).

In general, as the work of more people must be coordinated, as the time covered by decisions increases, and as financial and personnel

Table II-7

Degree to which Teacher Autonomy in the Average School in Twelve Decision Areas is Absent, by School Level

DECISION AREA	SCHOOL LEVEL			All Schools
	Elementary	Junior High	Senior High	
1. Hiring New Teachers	98.5 *	98.2	97.7	98.2
2. Deciding Whether to Renew a Teacher's Contract	96.8	96.8	97.7	97.0
3. Establishing Salary Schedules	94.8	95.8 *	90.7	94.3
4. Assigning Extra Duties	94.3 *	91.5	85.0	90.8
5. Determining How Discretionary Funds Will be Spent	94.5 *	86.7	81.7	88.3
6. Making Specific Faculty Grade Level and Course Assignments	92.3 *	80.3	67.7	80.1
7. Adding or Dropping Courses	81.0 *	77.5	56.7	73.0
8. Identifying Types of Educational Innovations to be Adopted	69.8 *	60.3	44.0	59.5
9. Selecting Required Texts and Other Materials	70.0 *	39.5	17.3	44.4
10. Working Out Details for Implementing These Innovations	48.3 *	40.8	36.7	42.2
11. Establishing the Objectives for Each Course	56.5 *	26.8	14.3	33.1
12. Determining Daily Lesson Plans and Activities	10.0	10.2 *	8.3	9.7
Overall Absence of T.A. Score	75.6	67.0	58.2	67.6

*For each decision area, indicates the highest score across the 3 school levels.

consideration become involved, teachers' autonomy declines. For instance, teachers have less influence over textbook selection--a financial decision--than over setting course objectives. Similarly, they have less influence over the decision on what innovation will be adopted (a long term, financial question) than over the details of its implementation.

While this zoning of control is clear, there remains a good deal of school-to-school variation in the absence of teacher autonomy. Scores range from a high of 83.7 to a low of 50.3 (see Appendix A, Table A-7 for details). Apparently control can be quite thoroughly centralized. In five of the schools over half the respondents reported they had minor influence or less in nine of the 12 decision areas.

Although in general control seems tight in all schools, there is a clear pattern of variation across schools at the three levels. Generally, the ranking of decision areas is quite stable; however, the absence of teacher autonomy increases as one moves from high schools (58.2) through junior high schools (67.0) to elementary schools (75.5). There are some rather dramatic differences. Generally, elementary teachers do not select textbooks while high school teachers do. Other large differences are in the areas of course objectives, deciding what innovations to adopt, determining what courses to add or drop, and determining course or grade level assignments. These major differences seem to reflect the pattern of subject matter specialization that exists more in secondary schools than in elementary schools. Elementary teachers, for the most part, are generalists assigned to teach most subjects to one class of students. By contrast, secondary school teachers are usually subject matter experts who teach many

classes in the same subject. This content expertise seems to provide high school teachers with a considerable measure of influence.

Coordination

Coordination refers to mechanisms for ensuring that different parts of an organization operate in a complementary fashion. There has been a tendency to confuse coordination and control in schools and assume they refer to the same phenomenon (see, for example, Abramowitz and Tenenbaum, 1978). However, in contrast to control which focuses on mechanisms to ensure that participants accomplish their tasks, coordination refers to the ways in which tasks are interrelated to effectively achieve the school's goals. In the rational bureaucracy, coordination is achieved through advanced planning which is often centralized.

Less attention has been given to coordination in schools than to the other dimensions employed in the rational-natural distinction. In other fields, planning is often assumed to occur through the impersonal flow of information--budget data, production data, quality data, etc.--to top administrators through formal procedures. Administrators analyze data and make decisions. However, these procedures have relatively little scope or impact in schools (Hanson and Ortiz, 1975); thus, more suitable mechanisms for coordination are needed for research purposes. In her examination of the I/D/E/A change project, Bentzen (1974) pointed out that schools have numerous meetings that can be used to coordinate activities, but she suggests that such sharing often does not take place. In meetings,

information can be shared through discussion, and decisions can then be reached and implemented. Our initial thinking was that the extent of discussion in meetings could be taken as an indicator of information sharing. The absence of discussion suggests a one-way, downward information flow that is unlikely to promote effective coordination. The extent to which decisions made at meetings are implemented is suggestive of effective coordination. Hence, we expected that extensive discussion and frequent implementation of meeting decisions would be an indicator of a rational bureaucracy.

Meeting Discussion

We asked our informants to report the percent of time devoted to discussions (as distinct from presentations) in four different kinds of meetings. Their responses were in the form of approximate percentages which were then averaged across informants within each school to obtain a "frequency of discussion" score for each type of meeting which could range from zero (no discussion) to 100 (all discussion). (See Appendix A for scoring procedures and Appendix B, question 6 for the actual response format.)

Table II-8 presents the resulting "frequency of discussion" scores for the average school at each level and for each type of meeting. Across all schools and all types of meetings, just a little more than half the time is devoted to discussion (55.3 percent). However, there are differences among types of meetings. In the average school the least discussion is found at school-wide staff meetings (41.5 percent). These meetings are large and include people with a wide variety of responsibilities.

Table II-8

Percent of Meeting Time in the Average School Devoted to Discussion in Four Types of Meetings, by School Level

TYPE OF FORMAL MEETING	SCHOOL LEVEL			All Schools
	Elementary	Junior High	Senior High	
1. Department or Grade Level Meetings	64.0	65.8*	58.0	63.5
2. Meetings with Parent or Community Groups	55.5	64.2*	60.0	60.5
3. Meetings of Department or Grade Level Heads	57.0	58.0*	48.3	55.5
4. School Wide Staff Meetings	42.5	43.3*	36.7	41.5
Overall Discussion Score	54.8	57.8	50.8	55.3

*For each type of meeting, indicates the highest score across the 3 school levels.

most discussion takes place at department and grade level meetings (63.5 percent), where people assigned similar tasks come together to ensure that they are working in a complementary fashion. This is not so much advanced planning as detailed coordination of the day-to-day activity in the areas where teachers have most autonomy.

When we turn from the average of all schools to the average school within each of the three levels, we observe a greater range in the amount of meeting time devoted to discussion--from a high of 65.8 percent for department meetings in junior high schools to 36.7 percent for school wide staff meetings in senior highs. However, the monotonic pattern across school levels found in the case of product goal consensus and both measures of control is not apparent here. Although on the average elementary schools devote more meeting time to discussions (54.8 percent) than do senior highs (50.8 percent), it is the junior high schools which devote the most time (57.8 percent).

Implementation of Meeting-based Decisions

Information obtained through discussion can be used to actually make decisions during meetings, or it can be held to be used at another time, or simply ignored. To get some indication of how meeting information is used, we asked informants to report the frequency with which decisions made in the four types of meetings were "actually carried out." The response alternatives which they could check were coded numerically as percentages with a response of "never" being given a score of zero, "rarely" a 12, "sometimes" a 25, and "usually" a 75 (See appendix A for a dicussion and Appendix B, Question 8 for the response format).

Table II-9 presents the resulting "implemented decisions" scores. Typically, decisions made in school meetings are not carried out, for across all types of meetings the average score is only 40.2. When comparing the different types of meetings, what stands out is that decisions made in grade level or department meetings are implemented most consistently (a score of 50.1), followed by school-wide staff meetings and meetings of department heads (both with scores of 38.5), and meetings with parents or community groups (33.6). When we examine the three school levels separately, we again find that decisions made in meetings are more frequently implemented in elementary schools (a score of 45.5) than in senior high schools (38.7). However, they are least frequently implemented in junior high schools (37.4).

A particularly interesting across-meeting pattern emerges when one compares Tables II-8 and II-9. Together these tables suggest a very different pattern of activity in different kinds of meetings. The locus of communication through meetings seems to be the grade level or department. There meetings are dominated by discussion, and decisions are most likely to be implemented. This pattern seems to reflect both the size of the group meeting, which is small enough to permit discussion, and the interdependence of its members. Teachers of the same grade or of different sections of the same course may feel that they have some interest in bringing students along at the same rate, or at least having them at the same point at the end of the school year. Moreover, when they teach the same material, they may discover and share tricks of the trade. When teachers in a department have different courses, there may still be interdependence--

Table II-9

Percent of Decisions Made in Four Types of Formal Meetings that are Implemented in the Average School, by School Level

TYPE OF FORMAL MEETING	School Level			All Schools
	Elementary	Junior High	Senior High	
1. Department or Grade Level Meetings	52.5*	48.5	50.0	50.1
2. School Wide Staff Meetings	48.0*	34.5	34.0	38.5
3. Meetings of Department or Grade Level Heads	40.5	35.3	42.3*	38.5
4. Meetings with Parents or Community Groups	41.0*	31.3	28.3	33.6
Overall Implemented Decision Score	45.5	37.4	38.7	40.2

*For each type of meeting, indicates the highest score across the 3 school levels.

e.g., the work of the advanced algebra teacher can be helped or hindered by the person teaching beginning algebra. Hence, there is an interest in sharing information and reaching decisions.

The meetings of department heads show a different pattern with somewhat less discussion and considerably less implementation of decisions. Since these meetings are also typically of small groups, the number of people involved should not serve as a barrier to communication or action. One interpretation of the decrease in implementing decisions in meetings of department heads is that it stems from the absence of interdependence between department when compared to that between individuals within a department. For instance, what is taught in science has relatively little impact on English instruction, and there is enough overlap in content within subject material presented in different grade levels to permit loose coordination.

Parent meetings rarely lead to decisions that are implemented, although they generate nearly as much discussion as department meetings. Previous field work suggests that parent meetings serve different functions from the three other types listed (Firestone, forthcoming). Parents do not serve in a line or staff capacity in a school, and their formal channel for representation is through the school board. Hence, rather than providing a setting for within-staff communication and coordination, parent meetings serve as an outlet for concern about or praise for the school. They are both a public relations device and an opportunity to obtain information on the sentiments of an important part of the school's environment. When decisions do stem from such meetings, they tend to be made later, probably after consultation within the school.

The linkage between meetings and subsequent implementation of decisions is especially loose with regard to parent meetings, but such looseness probably exists in the other three settings as well. Moreover, there are other coordination mechanisms that this emphasis on meetings has not allowed us to tap. A more fine-grained analysis, both conceptual and empirical, is needed before we will have as much confidence that we are measuring the dimensions of coordination as effectively as we have those of control. Nevertheless, it is apparent that there are differences in the amount and kind of coordination that takes place in different settings in schools as well as in the amount of coordination within schools at different levels.

Differences Across School Levels

In order to summarize the pattern of differences among elementary, junior high, and senior high school suggested within our analysis of the six organizational dimensions, we have computed (across the 49 indicators selected to tap the six dimensions) the number of times the score for the average elementary school was greater than that for the average junior or senior high school. In a similar fashion we have computed the number of times the average junior high school and the average high school scored highest. The resulting counts clearly suggest the preeminence--within those 13 schools--of elementary schools as rational bureaucracies. On 32 of the

49 indicators of a rational bureaucracy which we have developed, the average elementary school received the highest score (Table 11-19). In only 15 instances did the average junior high school receive the highest score, and in only 2 of the 49 instances was it the average senior high school. Although the means which were used to select these schools for study may have resulted in their being different from schools in general, this finding of a high degree of correspondence between elementary schools and the rational bureaucratic image seems worthy of further investigation, for, within the conventional wisdom about schools, attributes of rational bureaucracies are generally thought to be more prevalent within secondary schools.

Conclusion

This chapter introduced six dimensions of schools as organizations that could be studied through the Field Studies Professional Staff Questionnaire, used them to both examine differences among schools at different levels and to explore the utility of a distinction using the rational bureaucracy and the natural system images of schools.

A number of important differences were found among schools at different levels. While these differences may be related to the preference of the RBS components in selecting the schools, in most cases there is no reason to believe that any selection effects predominate. In the two cases where it was possible to explore the alternative hypothesis that component selection caused the finding, the evidence did not support such an alternative. With respect to product goals, all schools (regardless of the RBS component that selected them) seem to emphasize basic skills and place

TABLE II-10

Number of Indicators Ranked Highest Across the Three School Levels, by Level and Dimension

Dimension	School Level			Number of Indicators
	Elem	Jr. High	Sr. High	
Consensus on Product Goals	9	3	0	12
Consensus on System Goals	6	4	0	10
Control Through Formal Rules	5	2	0	7
Control Through Absence of Teacher Autonomy	9	2	1	12
Coordination Through Formal Discussion	0	4	0	4
Coordination Through Implemental Decisions	3	0	1	4
Total	32	15	2	49

Note: The counts in the body of this table were obtained by summing number of times an asterisk appeared within the appropriate body of Tables II-4 through II-9.

much less stress on a number of other potential goals. The basic skills emphasis seems to be strongest in elementary schools, these schools also emphasize building students' self-esteem. Junior high schools place more emphasis on building interpersonal skills and respect for authority, while high schools tend to stress a wider range of subjects including direct preparation for the world of work.

Across all schools there seems to be a definite division of control depending on the decision area in question. Teachers have greatest autonomy over day-to-day affairs; however, their autonomy is within limits. As decisions require a longer time perspective, consideration of financial matters, and the coordination of more people, teachers' autonomy declines. The overall ranking of our ten indicators is the same at all levels, but elementary teachers clearly lack autonomy more than secondary teachers do. Perhaps because of their subject matter expertise, high school teachers have considerable control over decisions that indirectly limit elementary teachers' day-to-day autonomy. Elementary teachers are also more constrained by rules than are senior high school teachers.

Coordination refers to the extent to which tasks performed in a school are interrelated. This exploration focuses on the use of meetings for coordination. About half the time in four different kinds of meetings is devoted to discussion and information sharing, but decisions made at meetings are not routinely implemented. School level differences vary somewhat from those for the other two domains in that the most time is given over to discussion at junior high school meetings. However, decisions are most frequently implemented at the elementary level. When examining goal consensus, control, and

coordination together, it appears that elementary schools most resemble the rational bureaucracy.

CHAPTER III

ADDITIONAL CORRELATES OF THE TWO IMAGES

The previous chapter suggests that it is possible to distinguish among schools that correspond to different images. There are a number of possible explanations for why particular schools tend more towards one image or the other. These include, among others, the structural characteristics of the school including its size, division of labor, and patterns of student assignments; characteristics of the students served; characteristics of the staff; and characteristics of the environment such as the support provided by different groups and the extent and direction of influence exercised. School level, which the previous chapter suggested was an important correlate of the distinction between the two images, is a proxy for a number of variables related to organizational size, division of labor, and such student characteristics as age and heterogeneity. This chapter explores further the differences among schools corresponding to each image, first by developing a way of determining which schools correspond best to each image and then by examining differences between schools of the two types. Two data sources are used: school demographics and the reports of our teacher informants.

Classifying the 13 Schools

To make our search for correlates of the two images more efficient, we needed a summary measure to replace the six separate indexes presented in Chapter II. Since not all of our measures, especially systems goals consensus, were positively correlated (see Appendix A, Table A-12), it was necessary to choose the most effective subset. Because we wanted to preserve the three primary domains of goal

consensus, control, and coordination, we selected one index of each. Using criteria discussed in Appendix A, we selected Consensus on Product Goals, Rule Enforcement, and Formal Discussion.

Once these dimensions were selected, we obtained a summary measure of the overall rank of each school across the three indexes by summing its rank on each and ranking the resulting sum across the 13 schools (see Appendix A, Table A-13). Then to determine which schools would be considered most like rational bureaucracies and which most like natural systems, the following decision rules were employed:

- If a school was at or above the median rank--i.e., seven or higher--on all three indexes, it was classified as a rational bureaucracy.
- If a school was at or below the median on all three indexes, it was classified as a natural system.
- The remaining schools were placed in an unclear category.*

Table III-1 presents the rank ordering of the 13 schools and shows where the divisions were made among the three image categories. This table reinforces the impression of the single index analysis that elementary schools correspond best to the rational-bureaucratic image. The natural systems group contains no elementary schools; it is a mixture of junior and senior high schools. In fact, junior highs are spread throughout the continuum having been classified as rational (one school), unclear (three), and natural (two).

There is one important caveat. The three rational-bureaucratic schools--Smalltown Elementary, Southend Elementary, and Smalltown

*See Appendix A for a more extensive discussion of the procedures used to create this summary classification of the 13 schools.

Table III-1

A Summary Classification of the 13 RBS Schools
in terms of the Rational-Natural Systems Imagery*

Image	School
Rational System	Southend Elementary School
	Smalltown Elementary School
	Smalltown Middle School
Unclear	Middleburg Elementary School
	Washington Elementary School
	Suburb Jr. High School
	Farmcenter Jr. High School
	Bigtown Sr. High School
	Riverside Jr. High School
Natural System	Greenhills Jr. High School
	Oldtown Sr. High School
	Urban Jr. High School
	Neighbortown Sr. High School

*See Appendix A for a discussion of the procedures used to create this summary classification of the 13 schools.

Middle--are all from the same small rural school district. Each of the other ten schools is from a different district. In an important sense this is a finding; school districts can be a rationalizing, bureaucratizing force. We will return to this issue below. However, the fact that all three rational-bureaucratic schools come from a single district must be remembered in examing other correlates of the two images.

Demographic Variables

Table III-2 presents demographic data on the schools drawn from school records or estimates made by their principals. Although a number of measures were examined, this table summarizes only those that show a definite monotonic trend--i.e., the rational-bureaucratic schools are at one extreme, the natural-system schools are at the other, and the unclear schools are in between. The demographic data provide information on organizational size, student body characteristics, and staff characteristics.

Organizational Size

Organizational size is often cited as a primary source of bureaucratization (Blau, 1974). Very simply, in larger organizations, personal control by the chief executive is less effective; it must be supplemented by impersonal mechanisms such as the use of rules. Other things being equal, coordination is also more difficult in large organizations because the activities of more people must be taken into account.

The demographic data available to us include two measures of school size and one for the size of the district. The school size measures are the number of pupils and number of staff. These two are highly correlated (Spearman r = .97). The relationship between size and image is also a strong one, but in the opposite direction from what might be expected. The

TABLE III-2

Selected Demographic Variables by School and System Type

	School by System Type*	# Pupils	# Staff	# Pupils in District (÷1000)	% Fathers with College Education	# Teachers with M.A.	% Teachers Male	% Teachers 1st Year in School
Rational System	Southend Elementary School	375	20	2	5	0	5	10
	Smalltown Elementary School	628	43	2	5	5	16	12
	Smalltown Middle School	575	42	2	5	10	31	19
	AVERAGE SCHOOL	526	35	2	5	5	17	14
Unclear	Middleburg Elementary School	677	38	11	15	63	16	16
	Washington Elementary School	390	27	5	1	29	4	4
	Suburb Jr. High School	830	58	2	21	22	3	9
	Farm Center Jr. High School	676	53	11	3	19	42	6
	Bigtown Sr. High School	2654	182	9	15	32	42	1
	Riverside Jr. High School	921	79	20	3	13	38	3
	AVERAGE SCHOOL	1025	73	10	10	30	24	7
Natural System	Greenhills Jr. High School	726	51	5	60	29	47	4
	Oldtown Sr. High School	3146	172	8	20	37	60	6
	Urban Jr. High School	1485	101	200	3	52	41	13
	Neighbortown Sr. High School	799	58	3	7	38	57	5
	AVERAGE SCHOOL	1539	96	54	23	39	51	7

* Schools arranged according to their rank order on the Overall School Context Score (see Table III-1)

average natural system school is almost three times the size (1539 pupils) of the average rational-bureaucratic one (526 pupils). This finding is surprising and suggests several possible interpretations. First, size is likely to be confounded with some other variable. For instance, elementary schools are typically smaller than high schools, and our data indicate that elementary schools tend towards the rational-bureaucratic direction. Second, the specific measures used may be sensitive to size in ways not predicted by our theory; the linkage of measure to concept may be weak. For instance, the measure of coordination employed is frequenc of discussion in meetings. One might expect smaller organizations to be able to make more provision for discussion because there are fewer discussants. Goal consensus may also be easier to achieve in smaller organizations because there are fewer people who have to agree. Finally, past research on the correlates of size attends more to the bureaucratic than the rational aspect of the rational-bureaucratic image (see also Corwin, 1974).

District size is also associated with the two images in the opposite way from what might be expected; schools in larger districts are more like natural systems. This finding may stem from the impact of a few districts on a small sample. For instance, the three rational-bureaucratic schools are all in one small, rural district; and one of the natural systems schools--Urban Junior High--is in one of the largest districts in the country. This district is ten times the size of the next largest district in the study. Still, this pattern of finding about organizational size, which

contradicts what previous research leads one to expect, calls for further exploration.

Student Body Characteristics

Data were collected via principals' estimates of student body characteristics including the proportion of students one year or more behind grade-level in reading, the proportion who transfer in during the school year, the proportion whose fathers have a college education, and the proportion who are white. The first two constitute educational or management problems for a school. One might expect that the presence of a large number of students who cannot read well would force consensus on goals and increase the prevalence of control and coordination mechanisms to ensure that those goals are achieved. Similarly, frequent transfers can create the kind of instability that is often responded to in service organizations by the codification of rules for client-management. The other two measures might be taken as proxies for measures of conditions creating instructional problems.

Of the four measures, only the proportion of students with college-educated fathers revealed a monotonic association with the rational-natural distinction. When taken with the absence of other associations with student characteristics, this finding suggests the need for a different kind of interpretation. Parental education can be taken as a characteristic of the community as well as of students. From this perspective the argument can be made that higher status communities tend to undermine the rational bureaucracy. A number of studies suggest that there is more likely to be conflict about schools in higher status communities, at least in the suburbs (Peterson, 1974). If higher status parents are more likely

to get involved with schools and question the decisions of the professional staff, one might expect goal consensus to be more difficult to achieve, and observe frequent exceptions to rules as a result of special pleading or special circumstances arising from external instability.

Staff Characteristics

An examination of staff characteristics presents an opportunity to examine how occupational attributes relate to bureaucratization. Two frequently discussed issues concern the professionalization of teaching and the extent to which teaching is a "woman's" career (Dreeben, 1970). While professionals frequently operate as employees of complex organizations, the tension between professionalism and bureaucratization has frequently been noted (Gouldner, 1954; Wilensky, 1959). Each involves a different basis of authority and loyalty. The bureaucracy relies on codified rules and procedures to specify a hierarchy of authority and spheres of autonomy at each level. The employee is expected to be affiliated with the organization. By contrast, the professional's authority is based on expert knowledge gained through specialized training and certified by the institution of higher education that provided instruction or an independent licensing board. This body of special knowledge, in principle at least, provides the basis for the occupational group's mandate to provide service without external regulation. In general, where the special body of knowledge is recognized as extensive, the mandate to operate autonomously is broad. The extent to which teaching is a profession has frequently been questioned, but largely on the grounds that the body of special knowledge that exists is minimal (Dreeben, 1970; Sieber, 1975).

The issue of professionalism is especially relevant to this study. One of the important differences among school levels that could account

for the bureaucratization of elementary schools is the lack of specialized subject matter at that level. High school teachers gain a measure of expertise by having a content specialty that their supervisors do not share. This could provide a measure of autonomy that de-bureaucratizes the system. Moreover, commitment to their specialty could reduce goal consensus in the upper grades.

Sex composition could also influence the centralization of control in schools. Traditionally, men have a higher ascribed status than women; and neither the women's movement nor federal efforts to end sex discrimination have eliminated this distinction. Ascribed status could both give men more influence and encourage them to press to increase their spheres of autonomy. Anderson (1968) found that rules were less likely to be enforced in departments that were predominantly male than in those that were predominantly female, and some of the early studies of the unionization of teaching indicated that males were more militant than females (Rosenthal, 1969). Moreover, elementary schools typically have more women than do secondary schools.

While not frequently discussed, teacher turnover could also enhance bureaucratization. An established faculty has the opportunity to develop a core of informal norms and its own status structure that can compete with formal, bureaucratic means of control. Where effective, this informal system can mitigate the need for rules by providing a body of informal knowledge that governs behavior without recourse to more formal means. By contrast, rule enforcement and formal coordination mechanisms will more frequently be referred to when the teaching staff is new simply because

the informal system of control is not as well in place.

The demographic data include the proportion of the school's teaching faculty that has masters degrees (an indicator of advanced certification as a professional), the proportion who are male, and the extent of teacher turnover. All three of these variables operate as expected. There are fewer teachers with masters degrees, fewer men, and more new teachers in the rational-bureaucratic schools (Table III-2).

Variables From the Staff Questionnaire

The Professional Staff Questionnaire provides information on the school's environment as perceived internally. These data throw light on the role of two aspects of the environment that are important to a school and have the most direct contact with it--the central office and the surrounding community.

Central Office Influence

The hierarchy of positions in the school that runs from teacher to principal continues into the central office. This hierarchy can include a number of assistant superintendents, and there may be a variety of staff offices for curricular and administrative matters. At the apex is the superintendent who reports directly to the school board. Since the school board typically sets policy and that policy is elaborated and enforced in large measure by the central office, influence from the central office might be expected to increase the bureaucratization of the school.

To find out how extensive central office influence is in the 13 schools, professional staff were asked to assess its influence in each

of the same 12 decision areas on which they rated their own autonomy as presented in Chapter II. Ratings could range from zero for no influence to three for decisive influence. (The format for the question is presented in Appendix B, question 10).

Table III-3 presents the average central office influence score for each of the twelve decision areas for the schools that are classified as rational bureaucracies, unclear, and natural systems. This table indicates that the central office has the greatest influence in schools most like the rational-bureaucratic image and least in those most like the natural system. This pattern is a very consistent one; there are only three exceptions across the twelve decision areas.

The decision areas in Table III-3 are presented in a descending order of difference between the rational-bureaucratic and the natural systems image in order to further explore the question of zoning of influence in schools introduced in Chapter II. The area for which there is greatest difference (#1) is establishing salary schedules. Formally, this decision is made through collective bargaining between the school board and the teachers' union or professional association, but the superintendent and central office often play an active role in this decision. It seems probable that the difference in this area is attributable to the role of unions and professional associations. These are typically more active--and more strongly supported--at the secondary level. Although such decisions typically cover an entire school it seems likely that secondary teachers will at least perceive their associations as more influential in comparison to the central office.

TABLE III-3

Degree of Central Office Influence in Twelve Decision Areas, by System Type

Decision Area	System Type			R Minus N
	Rational (R)	Unclear (U)	Natural (N)	
1. Establishing salary schedules	2.28	1.53	1.34	0.94
2. Making specific faculty grade level and course assignments	1.94	1.39	1.08	0.87
3. Establishing the objectives for each course	1.40	1.35	0.71	0.69
4. Identifying types of educational innovations to be adopted	2.18	2.10	1.51	0.67
5. Selecting required texts and other materials	1.42	1.54	0.82	0.60
6. Working out details for implementing these innovations	1.55	1.55	1.11	0.44
7. Assigning extra duties	1.38	1.18	0.96	0.42
8. Deciding whether to renew a teacher's contract	2.42	2.21	2.08	0.34
9. Determining how discretionary funds will be spent	2.31	2.15	1.98	0.34
10. Adding or dropping courses	1.61	1.91	1.31	0.30
11. Hiring new teachers	2.47	2.29	2.21	0.26
12. Determining daily lesson plans and activities	0.31	0.55	0.22	0.09
Overall Central Office Influence Score	1.77	1.63	1.28	0.49

The next four areas reflect decisions that indirectly structure instructional activities: making faculty grade and course assignments, establishing course objectives, selecting innovations, and choosing textbooks. These are decision areas for which there is a great difference between elementary and secondary teachers. The findings suggest that these are potent means for rationalizing and bureaucratizing a school.

Finally, the area for which there is least variation across the two school types (#12) concerns daily activities. Apparently, individual teachers have so much autonomy in this area (see Table II-7) that district-to-district variation in central office influence is minimal.

Community Support

The relationship between school image and fathers' college completion noted earlier suggests that the community may also affect the school's organization. Our thinking was that a supportive community can be a stabilizing force permitting the growth of goal consensus and consistent enforcement of rules. A school under siege might be forced to make its goals ambiguous to accommodate conflicting publics and to make numerous exceptions to rules as a result of special pleading.

Our staff informants were asked questions about the extent to which the community respects teachers and treats them as professionals, appreciates the schools, and makes teachers feel as if they are a part of the community. Their responses were coded to produce a support score for each school in each area that could run from a low of 0 to a high of 100. (The response format for these items is shown in Appendix B, question 4. The scoring procedure is described in Appendix A.)

Table III-4 presents the average score in each area across the schools

Table III-4

Average Degree of Community Support
in Three Areas by System Type

AREA OF COMMUNITY SUPPORT	System Type			R minus N
	Rational (R)	Unclear (U)	Natural (N)	
Degree to which professional staff members report that:				
1. The people in this community respect their teachers and treat them as professionals.	60.2	44.4	49.4	10.8
2. The people in this community appreciate the schools and what they are doing.	57.4	42.1	49.0	8.4
3. The people in this community make the teachers feel as if they are a real part of the community.	47.3	33.6	43.9	3.4
Overall Community Support Score	55.0	40.0	47.4	7.6

that most correspond to the rational-bureaucracy and natural system images and for those that are classified as unclear. While for all three areas of community support the rational-bureaucratic schools do receive more support than the natural system schools, the least support is found among those that we classified as unclear.

Conclusions

Our conclusions regarding why some schools tend to exhibit the characteristics of rational bureaucracies and others of natural systems must be viewed as primarily suggestive, for our sample of schools is a small one selected primarily on programmatic grounds, and there are no doubt errors of measurement associated with most of our variables, particularly those based upon the estimates of school principals. Nevertheless, the findings presented above indicate some consistent patterns in how organizational size, the characteristics of a school's staff members, and selected characteristics of its larger environment distinguish between the two images. Schools corresponding to the rational bureaucratic image are most likely to be elementary schools. They are usually small--probably because they are at the elementary level--and they may be found in smaller districts. The staff of these schools are less well educated than those in the natural systems schools and they are more predominantly female. Without a specialization or degree to reinforce their professionalization, elementary teachers seem to be susceptible to influences from the top of the administrative hierarchy. Teacher turnover in elementary schools seems to undercut the development of a strong peer support system that can compete with these rationalizing, bureaucratizing forces. Apparently as a

result, central office influence is strong in schools conforming most closely with the rational-bureaucratic image, with most of the differences between them and the natural-system schools falling among decision areas which can usefully by employed to circumscribe teacher autonomy and maintain centralized control of instructional activities.

By contrast, schools conforming most closely to the natural-system image are the larger, more professional and more predominantly male-staffed high schools. These characteristics of high schools seem to mitigate the impact of central office, and with a more stable teaching force their peer support systems may be stronger as well.

Whereas the level of a school, its size, the characterisitcs of its staff, and the influence it is subject to from the central office all produce consistent associations with system type, this is not the case with respect to our measures of parental characteristics and community support. The schools corresponding most closely to the rational-bureaucratic image tend to experience the highest degree of community support, yet have pupils whose fathers are more likely not to have completed college. Such a finding suggests two interpretations: 1) that a student body characterized by educational disadvantage will tend to rationalize and bureaucratize a school, and/or 2) that a complacent or supportive community will have a similar effect. Unfortunately, our measures of both variables lack sufficient precision to identify the degree to which either (or both) interpretations is valid. This is only one of many uncertainties resulting from our research to date regarding the degree to which schools conform more to one organizational image than they do to another and the degree to which other variables about schools are associated with their correspondence to

particular images. In the next chapter we consider more explicity the limitations of our research to date and suggest how those who desire a clearer understanding of schools as organizations might best proceed.

CHAPTER IV

NEXT STEP IN THE STUDY OF SCHOOLS AS ORGANIZATIONS

The empirical research presented in this report has shown that schools vary in the degree to which they correspond to two images of social organizations (Chapter II) and that their correspondence to a particular image is associated with school level (Chapter II) and other characteristics of their organizational structure and environment (Chapter III). Although our findings lend support to those who argue that important variation exists among schools, their generality is clearly limited by both the size of the sample of schools available to us for study and the criteria used in its selection.

In this concluding chapter we discuss these and other limitations of our research, both conceptual and methodological, in order to facilitate those who wish to push beyond its exploratory form. We consider first two roles of respondents in multischool, multirespondent research, those of informant and of subject, and explore an issue of data reliability associated primarily with the informant role. We then discuss some of the conceptual and operational problems associated with the use of data from both types of respondents, consider issues of sampling and sample size, and identify some ways in which the conceptualization of schools as organizations which guided our research could be expanded. Finally, we suggest some elements of a design which we consider ideal for exploring further the existence and implications of variation both among and within schools. However, before turning to these specific issues it may be helpful to consider multischool, multirespondent research within the context of other

methodological approaches which have in the past been utilized in the study of schools as social organizations.

Three Approaches to the Study of Schools as Organizations

The empirical study of elementary and secondary schools as formal organizations can be characterized in terms of three distinct methodological approaches: intensive observation in a single school, mailed questionnaires completed by a single respondent (usually the principal) in a large sample of schools, and self- or group-administered questionnaires completed by multiple respondents (usually teachers) in a more moderate number of schools. Although each approach could be used to provide additional insight into the issues raised in this report, the multischool, multirespondent approach seems to have the greatest potential for exploring complex organizational phenomena.

The observational approach has produced rich insight into intra-organizational dynamics (see, for example, Gordon, 1957; Gross, Giacquinta and Bernstein, 1971; Hollingshead, 1949; McPherson, 1972; Smith and Keith, 1971), but has been unable to address issues of interschool variability and leaves serious questions about the generality of whatever intraschool patterns have been observed. The use of a single respondent within a large number of schools has left much less doubt about generality and interschool variation (see, for example, Abramowitz and Tenebaum, 1978; Herriott and Hodgkins, 1973), but has been unable to address satisfactorily issues of intraschool variability.

The multischool, multirespondent approach arose largely as an attempt to blend the advantages of extensive observation--in this case through the use of many teachers as observers--with those to be gained from a large sample of schools. Its first systematic application to public schools was by Halpin and Croft (1963) who administered an 80-item questionnaire to 1151 teachers in 71 elementary schools in order to characterize each school on eight empirically derived dimensions of "organizational climate." In what to date has been the most extensive use of this approach, Herriott and St. John (1966) utilized questionnaire data from 3367 teacher-respondents in a national sample of 501 elementary, junior high and senior high schools to examine the relationship of the social class composition of a school's student body to a series of measures of teacher morale and job performance.

Although this early work within the multischool, multirespondent approach broke new methodological ground, and opened the range of organizational issues ammenable to empirical study, it gave little explicit attention to important theoretical assumptions which were being made in the late 1960s and early 1970s about schools as social organizations.* One of the first attempts to test empirically those assumptions was Anderson's (1968) exploration of the role of institutionalized authority in ten junior high schools within a single metropolitan school district. By administering a questionnaire to 161 teachers sampled from three selected departments in each school, Anderson was able to explore the

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*See especially Bidwell (1965), Corwin (1967, 1974), Herriott and Hodgkins (1973), and Katz (1964).

relevance of Weber's ideas about the function of formal rules (see Gerth and Mills, 1958) across schools and departments.

The research presented in this report represents an extension of the approach of Anderson (1968); and builds as well on that of Corwin (1970) who studied bureaucratic conflict in 28 senior high schools; Meyer, Scott, Cole, and Intili (1978) who studied differentiation and coordination in 16 elementary schools; and Rosenblum and Louis (1979) who studied organizational change in 45 rural elementary, junior, and senior high schools. The remainder of this chapter considers some of the conceptual and methodological issues faced by researchers using the multischool, multirespondent approach to explore theoretically derived insights about schools as social organizations.

Respondent Roles and Reliability Issues

Most multischool, multirespondent research asks respondents to answer questions from two distinct perspectives or roles. In one role they are asked to serve as informants about their school or its organizational subunits (e.g., departments, grade levels or classrooms). In the informant role respondents are viewed by the researcher as proxies for an outside observer who would be free to move about the school at will and are assumed to be providing objective data about it. In a second role respondents are asked to serve as subjects, with the questions addressed to them designed to learn about their personal characteristics, attitudes, and behavior as organizational members, rather than about the school and its organizational subunits. Studies of schools as social organizations

using the multischool, multirespondent approach generally summarize both types of respondent reports in the form of measures of central tendency (e.g., means or percentages), but increasingly attention is being paid as well to measures of dispersion (e.g., standard deviations or variances).

The research presented in this report used professional staff members in both respondent roles. In measuring goal consensus we treated respondents as subjects, asked them to express their personal preferences regarding the relative importance of various goals, and later combined their responses to reflect the degree of dispersion in these preferences within each school. In measuring control and coordination, however, we treated respondents as informants, asking them to describe their school as a whole and focused solely on measures of central tendency.

One of the first issues we faced was how to deal (both conceptually and empirically) with the fact that, within a given school, informants' responses to the same question varied greatly. Such variation can be attributed to three possible sources: 1) true variation in the phenomenon under study; 2) random measurement error (i.e., unreliability) due to ambiguity in the wording of the question, uncertainty in the mind of the informant, or simply inattentativeness on his or her part; and 3) systematic measurement error (i.e., bias) due to selective distortion. Both measurement error and true variation create challenges for the future use of multischool, multirespondent research to clarify the nature of schools. The challenge with regard to measurement error is to reduce it.

Although both sources of measurement error can complicate attempts to understand schools as social organizations, systematic measurement error seems to be the more serious problem in efforts to distinguish between different images of schools.

Procedures for adjusting informant data to correct for such "observer bias" on the basis of assumptions about the differential ability of different role incumbents to provide candid observations have been proposed (Seidler, 1974), but the empirical basis for such assumptions regarding professional staff members within schools has yet to be established. However, there is little question that future assessments of the organizational characteristics of schools could be made more accurate if the degree of observer bias associated with different professional staff members (e.g., principals, assistant principals, teachers, guidance counselors, librarians) as informants was better understood.

The challenge in the area of true variation is to revise existing images and theories to acknowledge it. This task is relatively simple where respondents are treated as subjects. There is already an established tradition of treating subject variation as an organizational characteristic. In this study, goal consensus is a clear example of a well established concept that is operationalized through a measure of dispersion of subjects' responses. Until recently, however, there has been no tradition of treating informant variation as an organizational characteristic. Most previous research (Herriott and St. John, 1966; Corwin, 1970) developed and analyzed only measures of central tendency. Yet, in his analysis

which treated departments, rather than schools, as the unit of analysis, Anderson (1968) provided the hint that there may be meaningful within-school variation. More recently, Meyer et al. (1978) found substantial within-school variation on a number of measures treating respondents as informants. They used this variation to argue that schools are "loosely-coupled" organizations.

True within-school variation on informant measures could indicate a number of things. For instance, variation in rule enforcement could indicate some form of prevalent bias based on personal characteristics of the informant--e.g., sex, race, years of experience--if it could be correlated with such characteristics. It could also indicate variation in departmental "power." For instance, the absence of rule enforcement in P. E. departments could reflect community support for a winning sports program.

The conceptual problem is to extend existing images and theories to take true informant variation into account. The methodological task is to separate true variation from error. Until adequate weighting techniques and other strategies are developed, it would seem advisable for researchers to examine their data serially from two extreme perspectives--that all interinformant variation is attributable to measurement error and that none is--in order to make explicit the range of interpretation possible within the same set of informant reports.

Conceptualizing and Operationalizing Organization-Level Variables

Regardless of whether one's objective is to focus on the reports of professional staff members as informants or as subjects in obtaining a measure of central tendency or of dispersion, there is a need to ensure that either statistic is a valid measure of the organizational phenomenon it is intended to represent. Although there have been two systematic attempts to codify procedures for measuring a range of organizational variables (Barton, 1961; Price, 1972), both have limited applicability to efforts to measure the organizational structure of schools. Relative to the measurement of individuals, the field of organizational measurement is still a very primative one characterized both by great variation in approach and much de novo instrumentation. Thus, there is much that still needs to be done both to make conceptually explicit the several different a priori images of how schools are organized and to identify how dimensions can be tapped empirically through questions addressed to respondents who are organizational members. Only when those tasks are completed can the accuracy of different images be tested.

One important distinction in the way in which organizational variables have been measured in the past is between single item and multi-item indices. The measurement of average class size within an elementary school, for example, probably requires no more than asking each teacher to be an informant about her class and to report the number of pupils assigned to her. The mean of the resulting variable within each school can be used as a measure of central tendency for that school and the

variance (or standard deviation) around that mean as a measure of dispersion. However, the existance of enforced rules, for example, is probably poorly tapped by such a single question as "Does this school have formal rules, and if so, are they enforced?" There is probably a need to consider different types of rules and the degree to which each is enforced.

Thus, beyond the straightforward measurement of organizational size, the empirical study of organizational structure is probably best served through the careful implementation of a six-step process of explication and measurement which goes both down and back up the "ladder of abstraction" to: (1) conceptualize major structural domains (e.g., control), (2) conceptualize major dimensions within each domain (e.g., control through formal rules), (3) identify specific organizational phenomena which can serve as indicators of each dimension (e.g., the existance of formal rules on lesson plans, textbook selection, etc.), (4) write clear and unambiguous questions designed to query teacher-informants about the existance of each indicator, (5) summarize multiple indicators into a single index for each relevant dimension, and where theoretically relevant (6) summarize multiple indices into a single variable for each domain. The first three of these six steps are conceptual and involve moving back and forth from domains to dimensions to potential indicators until the logic linking all three is clear and consistent. The link between steps 3 and 4 is a highly critical one, for it is here that theory and data interact. Unless the questions to be asked can stimulate valid and reliable answers from respondents there can be little hope of making a strong test of the underlying theory. If the link between indicators

at the conceptual level (step 3) and at the operational one (step 4) is a strong one, the process of building indicators, indices and variables can proceed smoothly; but if it is not, numerous inconsistencies can arise which make the separation of conceptual inadequacies from methodological ones extremely difficult.

The research presented in this report made a special effort to clarify in advance the organizational phenomena to be included in the domains of goal consensus, control and coordination (its three major conceptual domains), and to specify two dimensions within each domain. It also attempted to subdivide dimensions into four to twelve conceptual indicators, which in general were responded to unambiguously at the operational level by the professional staff members who were the respondents in this research. However, our efforts to combine operational indicators (i.e., the questionnaire responses) into indices (measures of the various dimensions) and further into variables (measures of the various domains) was hampered by the small size of our sample of schools. Thus, we were unable to weight various indicators differentially within a single reliable index, or to compare the independent and joint contributions of multiple indices within a single variable set in the prediction of various consequent variables--two analytic techniques which Rosenblum and Louis (1977, 1979) used most effectively in their study of the effects of organizational structure and culture on change within 45 rural schools.

Sampling and Sample-Size Issues

The multischool, multirespondent approach to the study of schools as social organizations encounters sampling issues at two levels: in the

selection of schools for study and in the selection of respondents within those schools. How one addresses both issues can have important implications for the utility and generality of the resulting research findings.

Selection of Schools

Although the reliability of research findings is greatly enhanced by the selection of large samples and its generality increased by the selection of samples drawn randomly from a broadly defined population of schools, in practice such objectives have been difficult to achieve. Anderson's (1968) research was based on data from only 10 schools in a single city and that of Meyer et al. (1978) on data from 16 schools in the San Francisco Bay area. However, since both samples were selected through the use of probability sampling within predefined populations, formal generalization--at least to those populations--was possible.

The research presented in this report was based upon a sample of schools selected for programmatic purposes rather than research purposes, a feature characteristic of contemporary action research. Under such conditions issues of political representativeness--as distinct from statistical randomness--influence site recruitment. Efforts are made to select schools in districts that exhibit a particular range of socio-economic characteristics, are represented by highly visible officials, or are willing to cooperate with a particular external agency. Because of the subordinate status of the RBS Field Studies Unit within the larger RBS programmatic effort, the 13 schools which we studied had been selected on the basis of negotiations between only RBS program staff members

and educational officials at the state and local level within Delaware, New Jersey, and Pennsylvania. Although we have no reason to believe that our sample is biased in any systematic way (see demographic data presented in Table I-1 and the within-component analyses presented in Chapter II), the fact that all three of the schools which we have concluded best correspond to the image of a rational bureaucracy are located within a single rural school district (see Chapter III) clearly limits the generality of our findings about the structural and environmental correlates of schools as rational bureaucracies and natural systems. Further research, involving samples of schools which are both larger than ours and are based upon probability sampling procedures, seems essential before one attempts to generalize our findings beyond the 13 schools upon which they are based.

Selection of Respondents within Schools

The selection of respondents within schools involves decisions regarding what role incumbents (e.g., administrators, teachers, librarians, custodians, parent volunteers, etc.) to use, how many of each to select, and how aggressively to guard against selective nonresponse. Decisions regarding who are the best respondents in attempting to learn about phenomena within schools hinge on both theoretical and practical considerations. Data about practices within isolated classrooms are probably best provided by teachers who are asked to tell only about their own classrooms. Data about the school more generally--e.g., the enforcement of formal rules, the frequency of particular types of meetings--probably need to be derived concurrently from many respondents located at different places within the school. Adequate provision should be made for par-

ticular respondents to disqualify themselves with respect to particular questions for which they have had little opportunity to observe the phenomenon under investigation. We elected to use nonadministrative professional staif members as our respondents. We also routed those who were not classroom teachers around groups of questions which applied only to the classroom and those who were uninformed about particular phenomena around these questions (see Appendix B).

Most multirespondent studies have attempted to collect data from all members of the relevant respondent roles. However, to our knowledge, no investigator has been successful in getting complete questionnaire data from all incumbents of the selected roles. If the response rate within a school is high (say 80 percent or above) sampling bias due to selective nonresponse is unlikely to be a factor in subsequent data analysis, but when the rate is low (say below 50 percent), serious issues of sampling bias due to nonresponse can arise depending upon the objectives of the research. These issues are complex and hinge on the distinction between respondents as informants versus subjects noted above and between research based upon the assumption of schools as unitary wholes versus loosely-coupled segments. If the respondents are themselves the subjects of the research, then it would seem essential that great attention be paid to possible nonresponse bias in data collection. This would also be advisable when the respondents are serving as informants about the school and one assumes that the school is highly segmented organizationally. However, if the respondents are serving merely as

informants about the school, and if one can assume that the school is a unitary whole equally accessible to all observers, sampling bias due to nonresponse would appear to be a moot issue as long as the number of respondents was sufficient to compute statistically reliable measures of central tendency.

Although we were able to obtain useable questionnaire data from at least 80 percent of our respondent population in seven of the 13 schools, in one school our response rate was only 29 percent (see Appendix A, Table A-1). In analyzing our data we were careful to examine whether that school was being characterized in anomalous ways, (it didn't seem to be), but we would be more confident about our findings if our characterization of all 13 schools were based upon data from at least 80 percent of the respondent population in each school.

Unfortunately, the advantages of attempting to collect useable data from all professional staff members in each school under study can trade off against its costs (is terms of both research expense and respondent burden), particularly if the advantages of a large sample of schools as noted above are to be achieved. In an effort to achieve a very large sample size (501 elementary, junior high, and senior high schools), Herriott and St. John (1966) elected to collect data from a probability sample of only 10 teachers in each school, regardless of its size. However, in order to avoid severe shrinkage in sample size due to teacher nonresponse they based their school-level variables on as few as four teachers in some schools. Although appropriate for some research purposes, such a limited number of respondents per school would clearly be

unwise in research designed to test competing notions of what schools are like as organizations, particularly where interobserver variation is viewed as an important measure of the school as an organization.

Exploring More Complex Conceptualizations of Schools

The research presented in this report took its conceptual cues from Corwin's (1974) distinction between images of schools as "rational bureaucracies" and as "natural systems." Although Corwin argued against viewing these two images simply as opposing ends of the same continuum we had little choice but to do so, given our sample of only 13 schools. However, with a larger sample of schools one could easily treat correspondence to the rational bureaucratic image and to the natural systems as distinct dimensions and attempt to locate schools within all four quadrants of the resulting two-dimensional space. In this way the question of whether these two images are opposite ends of the same continuum or distinct continua could be addressed empirically.

Such a two-dimensional formulation is only a start, however, in the needed efforts to expand the understanding of schools as organizations. Elsewhere we (Firestone and Herriott, forthcoming) have differentiated the natural system into two distinct subtypes--the political system and the loosely-coupled one--and have compared them conceptually to each other and to the rational bureaucracy. In addition we have conceptualized eight domains (as distinct from the three used in this report) which can be used to distinguish among schools in terms of these three images (see Table IV-1). This is only one of the many approaches to the more complex conceptualization of schools as social organizations which are needed to guide research beyond the limitations of our study.

Table IV-1

Patterns of Schools as Organizations by Domain and Image

Domain	Pattern by Image		
	Rational Bureaucracy	Political System	Loosely Coupled System
Goal Consensus	High	Fragmented	Low
Concentration of Power	High	Fragmented	Dispersed
Concentration of Information	High	Fragmented	Dispersed
Task Interdependence	Constant	Intermittent	Dispersed
Resources	Limited	Limited	Plentiful
Environmental Dependence	Low	Medium	High
External License	High	Medium	Low
Internal License	Low	Medium	High

Adapted from Firestone and Herriott, forthcoming

Elements of an Ideal Design

The preceding sections of this chapter highlight a series of conceptual and methodological issues which need to be addressed carefully by those who desire to explore further the nature and correlates of schools as social organizations. Although any particular study will need to be designed in terms of its specific objectives and the resources available for their pursuit, it seems worthwhile to speculate on what the elements of an "ideal" design--one unconstrained by financial or political limitations--might look like. In so doing we have assumed that the broad objectives of such an inquiry would be:

- to test the applicability of different conceptualizations of social organizations to schools as a general class;
- to explore variation across different types of schools, particularly on the basis of whether they are elementary, junior high or senior high schools; and
- to relate across-type differences to explanatory antecedent variables and to consequent variables which may explain their importance to those desiring to facilitate change within schools.

Given these objectives, and in the light of our experience in this research and our evaluation of the work of other sociologists in the conduct of multischool, multirespondent research as noted above (particularly the work of Anderson, 1968; Corwin, 1970; Meyer et al., 1978; and Rosenblum and Louis, 1977, 1979), we suggest that future research in this

area be judged in terms of the degree to which it contains the following design elements:

- the careful explication of a series of organizational domains, their several dimensions, and the indicators of each dimensions;
- the careful operationalization of empirical indicators for each dimension with extensive pretesting to minimize random measurement error associated with problems of clarity and ambiguity;
- a large sample of schools (at least 90), stratified in terms of level (elementary, junior high, senior high) and size (large, moderate, small pupil enrollment) across levels;
- the use of all professional staff members within each school as respondents in both the informant and subject modes, with provision for the differential weighting of the responses of different classes of respondents consistent with empirically verified assumptions about observer bias;
- group administration of all questionnaires within each school by researchers trained to insure that the conditions of data collection are highly uniform across all schools;
- extensive use of factor analysis and other multidimensional scaling techniques in the empirical examination of all indicators and in their differential weighting to

form indices (for dimension), and where theoretically relevant, variables (for domains);

- careful analytic distinctions between the use of respondents as informants and as subjects at both the index and variable levels of data analysis;
- after appropriate adjustment for systematic measurement error, an analysis approach which serially assumes that all residual interinformant variation is attributable to: (1) random measurement error and then to (2) true variation in the schools under study; and finally
- extensive use of multivariate analysis of variance (with appropriate covariance adjustments for extraneous variables) and/or multivariate regression (with provision for interaction terms) in the analysis of all indices and variables to locate schools within a multidimensional, multidomain space and then to identify antecedent and consequent variables associated with different locations.

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APPENDIX A

THE MEASUREMENT OF ORGANIZATIONAL DOMAINS AND THEIR DIMENSIONS

This appendix presents the measurement procedures used to construct index scores for the two dimensions within each of the four organizational domains considered in the body of this report. These domains and their dimensions are as follows:

DOMAIN	DIMENSION
1. Goal Consensus	1. Product Goals 2. System Goals
2. Control	1. Enforcement of Formal Rules 2. Absence of Teacher Autonomy
3. Coordination	1. Formal Discussion 2. Implemented Decisions
4. Environment	1. Influence from the Central Office 2. Support from the Community

In addition, we present the procedures used to combine the index scores for three dimensions (Consensus on Product Goals, Control Through the Enforcement of Formal Rules, and Coordination Through Formal Discussion)

into a summary variable which can distinguish schools which appear most like rational bureaucracies from those most like natural systems.

The data used to measure each dimension were obtained through a Professional Staff Questionnaire completed in the Spring of 1979 by classroom teachers and other non-administrative professional staff members in each of 13 schools in Delaware, New Jersey, and Pennsylvania who served as both subjects and informants in our research.* A total of 838 questionnaires were delivered to school principals for distribution to their professional staff members, 638 of which were subsequently returned to us in useable form--an overall response rate of 76 percent. Response rates for each school are presented in Table A-1.

Goal Consensus

The domain of "goal consensus" was investigated through the development of index scores for its two major dimensions: Consensus on Product Goals and Consensus on System Goals.

Consensus on Product Goals

The computation of Consensus on Product Goals score for each of the 13 schools involved a three-step process. We first asked the professional staff members to tell us the importance to them personally of each of 12 potential goals. Then within each school we computed consensus scores for each goal. Finally, we summarized across the 12 goals within each school.

*This distinction between "subjects" and "informants" is explicated in Chapter IV (see Respondent Roles and Reliability Issues).

Table A-1
Response Rates for the Professional Staff Questionnaires
by RBS School

	SCHOOL*													All Schools
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Number of Classroom Teachers and other Non-administrative Professional Staff Members Eligible to Complete the Professional Staff Questionnaire	32	35	37	18	40	81	47	66	56	50	54	165	157	836
2. Number of Useable Questionnaires	17	34	35	17	24	55	37	58	16	38	48	134	125	638
3. Response Rate	53%	97%	95%	94%	60%	68%	79%	88%	29%	76%	89%	81%	80%	76%

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

Measurement of Importance. In our effort to measure the importance of specific product goals within the 13 RBS schools, we asked subjects the following questions (see Appendix B, Question 2 for further details):

> Schools try to help students develop in many ways. However, some people prefer to stress some areas of student development while other people want to emphasize other areas. From the list below, select the three student development areas that are most important to you as a member of this school.
>
> 1. Basic Skills (reading and math)
> 2. Family Living
> 3. Self-esteem (self-concept)
> 4. Understanding Others (cultural pluralism, getting along with others)
> 5. Vocational Education
> 6. Science and Technology
> 7. Work (understanding the world of work, career education)
> 8. Health and Environment
> 9. Critical and Original Thinking
> 10. Respect for Authority (discipline, character building)
> 11. Citizenship Education
> 12. Arts and the Humanities

Our measure of the importance of each product goal within each school was the percent of subjects within that school who assigned to it one of their three choices (see Table A-2 for details).

Computation of a Within-goal Consensus Score. In order to obtain a consensus score for each goal within each school, we assumed that a situation where 50 percent of the subjects thought a particular product goal

Table A-2
Percent of Professional Staff Members Attaching
Importance to each of Twelve Product Goals by School

PRODUCT GOAL	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Basic Skills (reading and math)	100	93	100	100	100	73	87	92	100	79	72	84	84	89.5
2. Respect for Authority (discipline, character building)	43	61	62	57	61	44	74	62	61	61	31	45	47	54.5
3. Self-esteem (self-concept)	93	89	65	64	28	50	35	49	54	39	50	42	34	53.2
4. Understanding Others (cultural pluralism, getting along with others)	14	21	28	36	33	56	35	22	15	39	24	21	34	29.1
5. Critical and Original Thinking	7	18	21	7	33	23	29	24	31	14	31	38	26	23.2
6. Work (understanding the world of work, career education)	14	0	3	0	22	23	16	22	15	4	26	26	26	15.2
7. Health and Environment	14	4	10	21	0	3	10	3	0	11	9	5	7	7.5
8. Arts and the Humanities	7	7	7	0	0	6	3	11	0	21	7	9	7	6.5
9. Vocational Education	0	0	3	0	6	6	0	13	15	4	13	6	7	5.6
10. Family Living	7	4	0	14	6	9	0	0	0	4	9	5	10	5.2
11. Citizenship Education	0	4	0	0	6	6	10	3	0	18	4	6	2	4.5
12. Science and Technology	0	0	0	0	0	6	0	0	0	7	9	5	10	2.8
Number of Teacher Respondents	14	28	29	14	18	34	31	37	13	28	46	92	80	35.7

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

important (and thus 50 percent though it unimportant) represented the minimum consensus and assigned it a consensus score of "0." Consistent with this logic, a situation where either 100 percent of the subjects thought a particular goal to be important, or where 0 percent thought it so, was assumed to represent the maximum degree of goal consensus and was assigned a score of "100." To compute the actual score for each goal within each school, the absolute difference between a school's importance score for a given goal and a score of 50 was computed and multiplied by 2 (see Table A-3 for details).

Computation of a Within-school, Across-goals Consensus Score. In order to summarize consensus on product goals across the 12 goals within each school, we computed the simple average of the 12 Consensus on Product Goals scores for each school. Because the subjects had been restricted to selecting only the three most important of the 12 product goals, the maximum possible range in these Overall Consensus on Product Goals scores was from 50 to 100. In actuality the scores for the 13 schools ranged from a low of 59.8 to a high of 81.2, with a median score of 70.2 (Table A-3).

Consensus on System Goals

The computation of a consensus on System Goals score for each of the 13 schools involved a three-step process. We first asked the professional staff members (as subjects) to tell us the importance of each of 10 potential goals. Then, within each school we computed consensus scores for each goal. Finally, we summarized across the 10 goals within each school.

Table A-3
Degree of Consensus on each of
Twelve Product Goals by School

PRODUCT GOAL	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Science and Technology	100	100	100	100	88	100	100	100	100	86	82	90	80	94.3
2. Citizenship Education	100	92	100	100	88	88	80	94	100	64	92	88	96	90.9
3. Family Living	86	92	100	72	88	82	100	100	100	92	82	90	80	89.5
4. Vocational Education	100	100	94	100	88	88	100	74	70	92	74	88	86	88.8
5. Arts and the Humanities	86	86	86	100	100	88	94	78	100	58	86	82	86	86.9
6. Health and Environment	72	92	80	58	100	94	80	94	100	78	82	90	86	85.1
7. Basic Skills (reading and math)	100	86	100	100	100	46	74	84	100	58	44	68	68	79.1
8. Work (understanding the world of work, career education)	72	100	94	100	56	54	68	56	70	92	48	48	48	69.7
9. Critical and Original Thinking	86	64	58	86	34	54	42	52	38	72	38	24	48	53.5
10. Understanding Others (cultural pluralism, getting along with others)	72	58	44	28	34	12	30	56	70	22	52	58	32	43.7
11. Self-esteem (self-concept)	86	78	30	28	44	0	30	2	8	22	0	16	32	28.9
12. Respect for Authority (discipline, character building)	14	22	24	14	22	12	48	24	22	22	38	10	6	21.4
Overall Consensus on Product Goals Score	81.2	80.8	75.8	73.8	70.2	59.8	70.5	67.8	73.2	63.2	59.8	62.3	62.3	69.3
School Rank (13 = highest; 1 = lowest)	13	12	11	10	7	1.5	8	6	9	5	1.5	4	3	——

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

Measurement of Importance. In measuring the importance of specific system goals, we asked our subjects (see Appendix B, Question 3 for further details):

> In addition to student development, schools have a number of other goals. From the list of additional goals below, select the three that are most important to you as a member of this school.
>
> 1. Teacher Morale
> 2. Safety of Students
> 3. Cost Reduction
> 4. Teacher Autonomy or Independence
> 5. Professional Development of Teachers
> 6. Community Relations
> 7. Student Discipline
> 8. Innovation
> 9. Relations with the Central Office
> 10. Integration of Students from Different Races or Backgrounds

Our measure of the importance of each system goal within each school was the percent of subjects within that school who assigned to it one of their three choices (see Table A-4 for details).

Computation of a Within-goal Consensus Score. In order to obtain a consensus score for each goal within each school, we assumed that a situation where 50 percent of the subjects thought a particular system goal important (and thus 50 percent thought it unimportant) represented the minimum consensus and was assigned a consensus score of "0." Consistent with this logic, a situation where either 100 percent of the subjects

Table A-4
Percent of Professional Staff Members Attaching
Importance to Each of Ten System Goals by School

SYSTEM GOAL	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Student Discipline	71	48	75	71	75	73	97	80	80	78	59	75	76	73.7
2. Teacher Morale	79	76	54	35	62	62	81	56	53	78	65	64	69	64.2
3. Professional Development of Teachers	43	28	54	59	25	27	42	35	13	16	39	25	37	34.1
4. Community Relations	36	28	29	41	44	24	13	25	7	22	41	24	15	26.8
5. Innovation	29	10	29	29	12	13	6	22	53	9	35	25	17	22.2
6. Teacher Autonomy or Independence	14	24	11	18	12	11	16	25	67	25	20	18	19	21.5
7. Safety of Students	7	14	18	29	19	40	10	22	0	25	22	34	22	20.2
8. Integration of Students from Different Races or Backgrounds	21	3	18	6	37	30	19	15	7	19	0	22	27	17.2
9. Relations with the Central Office	0	7	11	6	0	5	16	15	13	28	13	6	12	10.2
10. Cost Reduction	0	0	0	6	6	5	0	0	0	0	2	2	1	1.7
Number of Teacher Respondents	14	29	28	17	16	37	31	40	15	32	46	99	82	37.4

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

thought a particular goal to be important or 0 percent thought it so, was assumed to represent the maximum degree of goal consensus and was assigned a score of "100." To compute the actual score for each goal within each school, the absolute difference between a school's importance score for a given goal and a score of 50 was computed and multiplied by 2 (see Table A-5 for the results of this scoring process).

Computation of a Within-school, Across-goals Consensus Score. In order to summarize consensus on system goals across the 10 goals within each school, we computed the simple average of the 10 Consensus on System Goals scores for each school. Because the subjects had been restricted to selecting only the three most important of the 10 system goals, the maximum possible range in the Overall Consensus on System Goals scores was from 33 to 100. In actuality the scores for the 13 schools ranged from a low of 50.4 to a high of 71.2, with a median score of 56.6 (Table A-5).

Control

The domain of "control" was investigated through the development of index scores for its two major dimensions: Control Through the Enforcement of Formal Rules and Control Through the Absence of Teacher Autonomy.

Control Through the Enforcement of Formal Rules

The computation of Control through the Enforcement of Formal Rules scores for each of the 13 schools involved a two-step process. We first asked the professional staff members (as informants) to tell us how

Table A-5
Degree of Consensus on each
of Ten System Goals by School

SYSTEM GOAL	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Cost Reduction	100	100	100	88	88	90	100	100	100	100	96	96	98	96.6
2. Relations with the Central Office	100	86	78	88	100	90	68	70	74	44	74	88	76	79.7
3. Integration of Students from Different Races or Backgrounds	58	94	64	88	26	40	62	70	86	62	100	56	46	65.5
4. Teacher Autonomy or Independence	72	52	78	64	76	78	68	50	34	50	60	64	62	62.2
5. Safety of Students	86	72	64	42	62	20	80	56	100	50	56	32	56	59.7
6. Innovation	42	80	42	42	76	74	88	56	6	82	30	50	66	56.5
7. Student Discipline	42	4	50	42	50	46	94	60	60	56	18	50	52	48.0
8. Community Relations	28	44	42	18	12	52	74	50	86	56	18	52	70	46.3
9. Professional Development of Teachers	14	44	8	18	50	46	16	30	74	68	22	50	26	35.8
10. Teacher Morale	58	52	8	30	24	24	62	14	6	56	30	28	38	33.1
Overall Consensus on System Goals Score	60.0	62.8	53.4	52.0	56.6	56.0	71.2	55.6	62.6	62.4	50.4	56.4	59.0	58.3
School Rank (13 = highest, 1 = lowest)	9	12	3	2	7	5	13	4	11	10	1	6	8	——

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

frequently rules were enforced in each of seven policy areas. Then, within each school we summarized across the seven policy areas.

Measurement of Rule Enforcement. In order to learn about the role of rules within the 13 RBS schools, we asked our informants to tell us whether policies existed in each of the following seven areas, and if a policy existed, the frequency with which it was enforced. The policy areas were as follows:

1. Lesson Plans
2. Textbook Selection
3. Discussion of Controversial Topics in the Classroom
4. Use of Curriculum Guides
5. Use of Corporal Punishment
6. Parental Visitation
7. Arrival and Departure Times for Teachers

Our measure of control through formal rules enforcement in each of these seven policy areas is the percent of informants in each school who said that a policy existed in a particular area and was "usually" enforced (see Appendix B, Question 1 and Table B-6 for further details).

Computation of a Within-school, Across Policy Areas Score. In order to summarize within each school the degree of rule enforcement across the seven policy areas, we computed the simple average of the seven within-area enforcement scores. These scores ranged from a low of 30.4 to a high of 58.1, with a median score of 45.9 (Table A-6).

Table A-6
Degree of Control Through Formal Rules
in Seven Policy Areas by School

POLICY AREA	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Arrival and Departure Time for Teachers	94	94	54	82	63	49	57	67	63	50	85	69	63	68.5
2. Lesson Plans	88	85	80	77	71	53	65	59	81	34	27	79	78	67.5
3. Use of Corporal Punishment	53	47	66	77	79	11	54	33	63	55	71	45	38	53.2
4. Parental Visitation	53	61	57	59	46	42	19	41	44	58	33	46	38	45.9
5. Use of Curriculum Guides	29	44	51	59	46	22	27	31	25	58	35	37	38	38.6
6. Textbook Selection	6	35	29	35	29	27	51	38	25	58	19	37	47	33.5
7. Discussion of Controversial Topics in the Classroom	6	9	9	18	17	9	5	16	13	8	6	10	11	10.5
Overall Control Through Rules Score	47.0	53.6	49.4	58.1	50.1	30.4	39.7	40.7	44.9	45.9	39.4	46.1	44.7	45.4
School Rank (13 = higest; 1 = lowest)	9	12	10	13	11	1	3	4	6	7	2	8	5	——

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

Control Through the Absence of Teacher Autonomy

The computation of Control Through the Absence of Teacher Autonomy scores for each of the 13 schools involved a two-step process. We first asked the professional staff members (in the role of informants) to tell us the degree of influence which teachers have in 12 decision areas. Then within each school we summarized across the 12 areas.

Measurement of Teacher Autonomy. In our effort to understand the degree to which teacher autonomy exists in each of the 13 schools, we asked our informants to tell us the degree to which individual teachers (as opposed to the school board, central office, principals and teacher groups) have influence over each of the following twelve decisions:

1. Selecting required texts and other materials
2. Establishing the objectives for each course
3. Determining daily lesson plans and activities
4. Adding or dropping courses
5. Determining how discretionary funds will be spent
6. Hiring new teachers
7. Deciding whether to renew a teacher's contract
8. Making specific faculty grade level and course assignments
9. Assigning extra duties
10. Establishing salary schedules
11. Identifying types of educational innovations to be adopted
12. Working out details for implementing these innovations

To measure the absence of teacher autonomy in each decision area we computed the percent of our informants in each school who said that individual

teachers had either "no" influence or only "minor" influence in that area. (See Appendix B, Question 10 and Table A-7 for further details.)

Computation of a Within-school, Across Decision Area Score. In order to summarize the degree to which teacher autonomy is absent in each of the 13 schools, we computed the simple average of the 12 within-area Absence of Teacher Autonomy scores. These scores ranged from a low of 50.3 to a high of 83.7 with a median score of 67.5 (Table A-7).

Coordination

The domain of "coordination" was investigated through the development of index scores for two major dimensions: Coordination Through Formal Discussion and Coordination Through Implemented Decisions.

Coordination Through Formal Discussion

The computation of Control Through Formal Discussion scores for each of the 13 schools involved a two-step process. We first asked the professional staff members (in the role of informants) about the frequency of formal discussion in four types of meetings. Then, within each school, we summarized across the four types.

Measurement of Formal Discussion. In order to tap this information-seeking and reconciliation aspect of coordination within the 13 schools, we asked our informants to report the percent of time which was devoted to discussions (as distinct from presentations) in the following types of meetings:

1. School-wide staff meetings
2. Department or grade-level meetings

Table A-7
Degree to which Teacher Autonomy in

DECISION AREA	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Hiring new teachers	100	100	100	94	100	100	97	98	100	94	98	97	98	98.2
2. Deciding whether to renew a teacher's contract	100	100	94	93	95	98	97	100	94	97	100	97	96	97.0
3. Establishing salary schedules	93	93	100	93	95	98	94	100	94	94	96	91	85	94.3
4. Assigning extra duties	100	100	90	87	79	98	89	98	94	91	75	93	87	90.8
5. Determining how discretionary funds will be spent	92	100	93	93	100	80	97	89	69	85	67	92	86	88.3
6. Making specific faculty grade level and course assignments	92	96	88	93	79	76	86	94	56	91	47	78	78	80.1
7. Adding or dropping courses	71	96	68	89	84	88	73	94	56	70	34	71	65	73.0
8. Identifying types of educational innovations to be adopted	100	93	53	43	58	60	59	65	50	70	39	54	40	59.5
9. Selecting required texts and other materials	67	84	67	62	55	32	34	61	19	36	6	35	11	44.4
10. Working out details for implementing these innovations	62	61	34	36	47	44	44	49	31	30	36	41	33	42.2
11. Establishing the objectives for each course	60	68	42	56	33	26	12	55	12	23	4	26	13	33.1
12. Determining daily lesson plans and activities	6	19	9	6	14	10	9	14	6	8	2	14	9	9.7
Overall Absence of Teacher Autonomy Score	78.6	83.7	69.8	70.4	69.9	67.5	65.9	77.1	56.7	65.7	50.3	64.9	58.4	67.6
School Rank (13 = highest; 1 = lowest)	12	13	8	10	9	7	6	11	2	5	1	4	3	——

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

3. Meetings of department or grade-level heads

4. Meetings with parents or community groups

Their responses, which were in the form of approximate percentages, were then averaged within each school for each type of meeting in order to obtain a "frequency of discussion" score which could range from 0 (no meeting time devoted to discussion) to 100 (all meeting time devoted to discussion)--see Appendix B, Question 6 for the actual response format. Our measure of the degree of coordination within each type of meeting was the simple average of the reports of the informants within each school (see Table A-8 for details).

Computation of Within-school, Across Meeting Type Scores. In order to summarize within each school the frequency of formal discussion across the four types of meetings we computed the simple average of the four within-type scores for each school. These summary scores ranged from a low of 38.5 to a high of 67.5, with a median score of 55.3 (Table A-8).

Coordination Through Implemented Decisions

The computation of Control Through Implemented Decisions scores for each of the 13 schools involved a two-step process. We first asked the professional staff members (in the role of informants) about the frequency with which decisions made in four types of meetings are implemented. Then, within each school, we summarized these frequency scores across the four types.

Measurement of Implemented Decisions. In order to tap the degree to which decisions made in meetings are subsequently implemented, we asked

Table A-8
Percent of Meeting Time Devoted to
Discussion in Four Types of Meetings by School

TYPE OF FORMAL MEETING	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol	
1. Department or Grade-Level Meetings	53	58	69	76	71	62	59	62	70	71	69	57	48	63.5
2. Meetings with Parent or Community Groups	28	60	62	72	72	74	70	64	56	49	43	74	63	60.5
3. Meetings of Department or Grade-Level Heads	53	46	68	60	82	32	68	56	55	55	44	54	47	55.5
4. School-wide Staff Meetings	20	42	46	62	42	50	46	40	40	42	38	42	30	41.5
Overall Frequency of Discussion Score	38.5	51.8	61.3	67.5	66.8	54.5	60.8	55.5	55.3	54.3	48.5	56.8	47.0	55.3
School Rank (13 = highest; 1 = lowest)	1	4	11	13	12	6	10	8	7	5	3	9	2	34

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

Table A-9
Percent of Decisions Made in Four Types of
Formal Meetings that are Implemented by School

TYPE OF FORMAL MEETING	SCHOOL*													Avg. School
	Elementary School				Junior High School						High School			
	Pa	Mi	SE	So	SM	Ur	Fa	RI	Su	Gr	Ne	Bi	Ol	
1. Department or Grade-Level Meetings	26	52	63	69	39	49	56	50	51	46	57	46	47	50.1
2. School-wide Staff Meetings	22	52	55	63	40	33	36	27	39	32	44	25	33	38.5
3. Meetings of Department or Grade-Level Heads	32	42	63	25	36	41	43	42	16	34	49	39	39	38.5
4. Meetings with Parents or Community Groups	33	41	46	44	41	37	33	23	27	27	31	26	28	33.6
Overall Implemented Decisions Score	28.2	46.8	56.8	50.3	39.0	40.0	42.0	35.5	33.2	34.8	45.3	34.0	36.8	40.2
School Rank (13 = highest; 1 = lowest)	1	11	13	12	7	8	9	5	2	4	10	3	6	——

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

our informants to report the frequency with which decisions made in the following types of meetings are actually implemented:

1. School-wide staff meetings
2. Department or grade-level meetings
3. Meetings of department or grade-level heads
4. Meetings with parents or community groups

Their responses, which were in the form of four frequency adverbs, were coded numerically as percentages with a response of "never" being given a score of 0, "rarely" a score of 12, "sometimes" a score of 25 and "usually" a score of 75--see Appendix B, Question 8 for the actual response format. Our measure of the degree of coordination through implemented decisions within each decision area was the simple average of the reports of the informants within each school (see Table A-9 for details).

Computation of a Within-school, Across Meeting Type Score. In order to summarize within each school the frequency with which decisions made in any type of formal meeting are subsequently implemented, we computed the simple average of the scores across the four types of meetings. These scores ranged from a low of 28.2 to a high of 56.8, with a median score of 39.0 (Table A-9).

Environment

The domain of "environment" was investigated through the development of index scores for two major dimensions: Environmental Influence from the Central Office and Environmental Support from the Community.

Environmental Influence from the Central Office

The computation of Environmental Influence from the Central Office scores for each of the 13 schools involved a two-step process. We first asked the professional staff members (in the role of informants) about the degree to which the central office influences decisions in each of 12 areas. Then, within each school, we summarized across the 12 decision areas.

Measurement of Central Office Influence. In order to obtain an indication of the degree to which the central office has influence over decisions relevant to each of the 13 schools, we asked our informants to report the degree to which the central office has influence over 12 decisions relevant to each of the 13 schools. These decisions are as follows:

1. Selecting required texts and other materials
2. Establishing the objectives for each course
3. Determining daily lesson plans and activities
4. Adding or dropping courses
5. Determining how discretionary funds will be spent
6. Hiring new teachers
7. Deciding whether to renew a teacher's contract
8. Making specific faculty grade level and course assignments
9. Assigning extra duties
10. Establishing salary schedules
11. Identifying types of educational innovations to be adopted
12. Working out details for implementing these innovations

Our informants could indicate either that the central office has "decisive" influence (coded 3), "moderate" influence (coded 2), "minor" influence (coded 1), or "no" influence (coded 0)--see Appendix B, Question 10 for details. Our measure of the degree of central office influence within each of the 12 decision areas was the simple average of the coded reports of the informants within each school (see Table A-10 for details).

Computation of Within-school, Across Decision Area Score. In order to summarize within each school the degree of central office influence across the 12 decision areas, we computed the simple average of the 12 within-area scores for each school. These summary scores ranged from a low a 1.11 to a high of 2.18, with a median score of 1.47 (Table A-10).

Environmental Support from the Community

The computation of Environmental Support from the Community scores for each of the 13 schools involved a two-step process. We first asked the professional staff members (in the role of informants) about the degree to which the community supports the schools in three areas. Then, within each school, we summarized across the three areas.

Measurement of Community Support. In order to tap community support, we asked our informants to tell us the degree to which:

1. The people in this community respect their teachers and treat them as professionals
2. The people in this community appreciate the schools and what they are doing
3. The people in this community make the teachers feel as if they are a real part of the community

Table A-10
Degree of Central Office Influence in
Twelve Decision Areas, by School and System Type

DECISION AREA	SCHOOL* BY SYSTEM TYPE																R Avg Minus N Avg
	Rational (R)				Unclear (U)							Natural (N)					
	So	SE	SM	Avg.	Mi	Pa	Su	Fa	Bi	Ri	Avg.	Gr	Ol	Ur	Ne	Avg.	
1. Establishing salary schedules	2.53	2.31	2.00	2.28	1.69	1.93	0.88	1.56	1.74	1.37	1.53	0.91	1.27	1.00	2.17	1.34	0.94
2. Making specific faculty grade level and course assignments	2.93	1.56	1.32	1.94	1.86	2.00	1.50	0.86	1.24	0.91	1.39	1.36	1.12	0.90	0.92	1.08	0.87
3. Establishing the objectives for each course	1.56	1.46	1.19	1.40	1.89	1.87	0.75	0.82	0.83	1.93	1.35	0.83	0.48	1.08	0.45	0.71	0.69
4. Identifying types of educational innovations to be adopted	2.57	2.28	1.68	2.18	2.56	2.23	1.13	2.00	1.80	2.00	2.10	1.91	1.26	1.42	1.47	1.51	0.67
5. Selecting required texts and other materials	1.88	1.33	1.05	1.42	2.19	2.07	1.13	1.03	0.98	1.83	1.54	0.86	0.63	1.04	0.77	0.82	0.60
6. Working out details for implementing these innovations	1.86	1.53	1.26	1.55	2.29	1.54	1.00	1.71	1.32	1.45	1.55	1.39	1.00	1.16	0.89	1.11	0.44
7. Assigning extra duties	1.93	1.10	1.11	1.38	1.44	1.69	1.38	0.54	1.16	0.90	1.18	1.26	0.88	0.90	0.81	0.96	0.42
8. Deciding whether to renew a teacher's contract	2.80	2.27	2.20	2.42	2.50	2.54	1.63	2.47	2.19	1.95	2.21	2.49	1.77	1.60	2.47	2.08	0.34
9. Determining how discretionary funds will be spent	2.53	2.17	2.24	2.31	2.30	2.33	1.92	2.39	2.27	1.69	2.15	2.30	1.82	1.50	2.28	1.98	0.34
10. Adding or dropping courses	2.27	1.56	1.00	1.61	2.78	2.00	1.69	1.52	1.27	2.21	1.91	1.33	1.04	1.17	1.70	1.31	0.30
11. Hiring new teachers	2.75	2.36	2.29	2.47	2.70	2.50	1.87	2.23	2.38	2.04	2.29	2.85	1.73	1.78	2.48	2.21	0.26
12. Determining daily lesson plans and activities	0.56	0.09	0.29	0.31	1.29	0.19	0.38	0.17	0.54	0.41	0.50	0.11	0.35	0.26	0.17	0.22	0.09
Overall Central Office Influence Score	2.18	1.67	1.47	1.77	2.12	1.91	1.27	1.44	1.48	1.56	1.63	1.47	1.11	1.15	1.38	1.28	0.49

*So = Southend, SE = Smalltown Elementary, SM = Smalltown Middle, Mi = Middleburg, Pa = Patriot, Su = Suburb, Fa = Farmcenter, Bi = Bigtown, Ri = Riverside, Gr = Green Hills, Ol = Oldtown, Ur = Urban, Ne = Neighbortown

Table A-11
Degree of Community Support in
Three Areas by School and System Type

AREA OF COMMUNITY SUPPORT	SCHOOL* BY SYSTEM TYPE																R Avg Minus N Avg
	Rational (R)				Unclear (U)							Natural (N)					
	So	SE	SM	Avg.	Mi	Pa	Su	Fa	Bi	Ri	Avg.	Gr	Ol	Ur	Ne	Avg.	
Degree to which professional staff members report that:																	
1. The people in this community respect their teachers and treat them as professionals.	60.9	65.6	54.2	60.2	40.9	33.8	54.7	57.4	42.1	37.5	44.4	66.9	47.8	38.9	44.1	49.4	10.8
2. The people in this community appreciate the schools and what they are doing.	57.8	64.4	50.0	57.4	42.4	29.4	54.7	50.0	40.3	35.5	42.1	70.3	44.2	35.2	46.3	49.0	8.4
3. The people in this community make the teachers feel as if they are a real part of the community.	46.9	52.2	42.9	47.3	35.6	25.0	37.5	42.9	33.6	26.8	33.6	54.9	44.0	28.2	48.4	43.9	3.4
Overall Community Support	55.2	60.7	49.0	55.0	39.6	29.4	49.0	50.1	38.7	33.3	40.0	64.0	45.3	34.1	46.2	47.4	-7.6

*So = Southend, SE = Smalltown Elementary, SM = Smalltown Middle, Mi = Middleburg, Pa = Patriot, Su = Suburb, Fa = Farmcenter, Bi = Bigtown, Ri = Riverside, Gr = Green Hills, Ol = Oldtown, Ur = Urban, Ne = Neighbortown

They could answer in terms of "yes" (coded 100), "generally yes" (coded 75), "generally no" (coded 25), or "no" (coded 0)--see Appendix B, Question 4, items m, n, & o for full details--which produced a series of three community support variables which could range from 0 (lowest support) to 100 (highest support). Our measure of the degree of community support within each of the three areas was the simple average of the coded reports of the informants within each school (see Table A-11 for details).

Computation of Within-school, Across Support Area Score. In order to summarize within each school the degree of community support across the three areas, we computed the simple average of the three within-area scores for each school. These Summary Community Support scores ranged from a low of 29.4 to a high of 64.0, with a median score of 46.2 (Table A-11).

Summary Measure of System Type

In order to make our search for correlates of the two images presented in Chapter 1 efficient, we elected to summarize what had been learned about goal consensus, control and coordination within the 13 schools into a single summary score which permitted the location of each school along the rational-natural continuum. There were three steps in this process.

Elimination of Weak Indexes

Our first step was the elimination of any of the six indexes which seemed to be negatively correlated with the other five, or whose correlations were so weak as to suggest that they were a poor indicator of the summary measure we desired to create. Only Consensus on System Goals

clearly fell into this category, for it is negatively correlated with both of the coordination indexes (Table A-12). We then decided that in order to include each of the three domains in our summary measure we would select the remaining measure of goal consensus (Consensus on Product Goals) and one measure each of control and coordination. Our criteria in selecting one measure of control and one of coordination was to maximize the average correlation among the three variables so selected. This led to the selection of the Enforcement of Formal Rules as our control index and Formal Discussion as our coordination index. The resulting three indexes had an average pairwise Spearman correlation of .41.

Create an Overall Rank for Each School

In order to obtain a summary measure of the overall rank of each school, we summed each school's rank across the three indexes and then ranked the resulting sum so that the highest rank (13) reflected the rational bureaucracy end of the continuum. The basic data and the results of our summing and ranking are presented in Table A-13.

Identify the Rational-Bureaucratic and Natural-System Schools

Although the second step produced an unambiguous ranking of the 13 schools, it left unanswered the question of which schools most conformed to the rational-bureaucratic image and which to the natural-systems one. We were reluctant to simply dichotomize the summary ranks into "high" and "low" categories, for such a procedure would ignore the fact that the three indexes used to form it were only moderately correlated. Therefore, we developed the following decision rules:

Table A-12

Matrix of Rank-order Correlations among the Six Organizational Variables (N=13)

Organizational Variable		Goals		Control		Coord.	
		1.	2.	3.	4.	5.	6.
Goals	1. Consensus on Product Goals	-	.33	.71	.66	.17	.09
	2. Consensus on System Goals		-	.04	.07	-.25	-.38
Control	3. Formal Rules			-	.55	.35	.20
	4. Absence of Teacher Autonomy				-	.15	.19
Coord.	5. Formal Discussion					-	.40
	6. Implemented Decisions						-

Note: The ranks used to compute these coefficients can be found in the bottom rows of Tables A-2 through A-7.

Table A-13

Ranking of the Thirteen RBS Schools on each of Three Organizational Context Variables (13=highest; 1=lowest)

OVERALL CONTEXT VARIABLE**	SCHOOL*												
	Elementary School				Junior High School						High School		
	Pa	Mi	SE	So	SM	Ur	Fa	Ri	Su	Gr	Ne	Bi	Ol
A. Goals:													
Consensus on Product Goals	13	12	11	10	7	1.5	8	6	9	5	1.5	4	3
B. Control:													
Formal Rules	9	12	10	13	11	1	3	4	6	7	2	8	5
C. Coordination:													
Formal Discussion	1	4	11	13	12	6	10	8	7	5	3	9	2
Overall School Score	23.0	28.0	32.0	36.0	30.0	8.5	21.0	18.0	22.0	17.0	6.5	21.0	10.0
School Rank (13=highest; 1=lowest)	9	10	12	13	11	2	6.5	5	8	4	1	6.5	3

*Pa = Patriot, Mi = Middleburg, SE = Smalltown Elementary, So = Southend, SM = Smalltown Middle, Ur = Urban, Fa = Farmcenter, Ri = Riverside, Su = Suburb, Gr = Green Hills, Ne = Neighbortown, Bi = Bigtown, Ol = Oldtown

**See Appendix B for a discussion of the criteria used to select these three variables from among the six candidates.

- If a school received a rank score at or above the median (a score of seven or greater) on all three indexes it was classified as a rational bureaucracy;
- If a school received a rank score at or below the median (a score of seven or less) on all three of the indexes it was classified as a natural system;
- If a school could not be classified in either extreme category it was classified as unclear.

The results of this classification procedure can be found in Chapter III (Table III-1).

The fact that six of the 13 schools were classified as unclear results from the moderate correlation among the three indexes and seems reasonable for exploratory research involving innovative measures and a small sample. The two dimensions of each of the three organizational domains which we formally conceptualized are merely a small subset of possible dimensions for each domain. In addition, the particular indicators which we utilized in operationalizing each of the three indexes selected for summarization do not fully capture the underlying dimensions. However, is spite of such limitations we were able to identify characteristics of schools which appear correlated with their location on this summary measure of the rational bureaucracy to natural system continuum (see Chapter III).

APPENDIX B

RBS PROFESSIONAL STAFF QUESTIONNAIRE

STUDY OF SCHOOL IMPROVEMENT PROCESS

PROFESSIONAL STAFF QUESTIONNAIRE

THIS QUESTIONNAIRE IS ANONYMOUS. PLEASE DO NOT SIGN YOUR NAME ANYWHERE ON THESE PAGES.

Research for Better Schools (RBS) is a regional educational research and development laboratory that is participating with a group of staff members at your school in a pilot school improvement project. One of the long-term goals of this effort is to design a school improvement model--procedures and materials that can be used in a variety of kinds of schools in subsequent years. In order to build such a model, it is necessary to learn as much as possible about the special environments that exist in different schools. This questionnaire will help RBS staff to put together a description of the environment of your school.

Please answer each question as best you can. Remember the information you provide will be treated in a highly confidential manner. In addition, no attempt will be made to identify the responses of individuals or groups within the school.

Research for Better Schools, Inc.
444 N. 3rd Street
Philadelphia, Pa. 19123

1. Listed below is a series of areas in which policies may or may not exist in your school. For each policy area please indicate:
   - Whether such a policy exists.
   - If such a policy exists, how consistently it is enforced.

POLICY AREA	IS THERE A POLICY IN THIS AREA?				IF A POLICY EXISTS, HOW CONSISTENTLY IS IT ENFORCED?				
	Yes, a Written One	Yes, an Unwritten One	No Policy Exists	I Don't Know	Usually	Some-times	Rarely	Never	I Don't Know
a. Lesson Plans	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Textbook Selection	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Discussion of Controversial Topics in the Classroom	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Use of Curriculum Guides	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. Use of Corporal Punishment	☐	☐	☐	☐	☐	☐	☐	☐	☐
f. Parental Visitation	☐	☐	☐	☐	☐	☐	☐	☐	☐
g. Arrival and Departure Times for Teachers	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Schools try to help students develop in many ways. However, some people prefer to stress some areas of student development while other people want to emphasize other areas. From the list below, select the three student development areas that are most important to you as a member of this school.

Place a number next to each area you select to show how important it is:

1 = the most important area

2 = the second most important area

3 = the third most important area

___ BASIC SKILLS (reading and math)

___ WORK (understanding the world of work, career education)

___ FAMILY LIVING

___ HEALTH AND ENVIRONMENT

___ SELF-ESTEEM (self-concept)

___ CRITICAL AND ORIGINAL THINKING

___ UNDERSTANDING OTHERS (cultural pluralism, getting along with others)

___ RESPECT FOR AUTHORITY (discipline, character building)

___ VOCATIONAL EDUCATION

___ CITIZENSHIP EDUCATION

___ SCIENCE AND TECHNOLOGY

___ ARTS AND THE HUMANITIES

___ OTHER _____

3. In addition to student development, schools have a number of other goals. From the list of additional goals below, select the three that are most important to you as a member of this school.

Place a number next to each area you select to show how important it is:

1 = the most important area

2 = the second most important area

3 = the third most important area

___ TEACHER MORALE

___ COMMUNITY RELATIONS

___ SAFETY OF STUDENTS

___ STUDENT DISCIPLINE

___ COST REDUCTION

___ INNOVATION

___ TEACHER AUTONOMY OR INDEPENDENCE

___ RELATIONS WITH THE CENTRAL OFFICE

___ PROFESSIONAL DEVELOPMENT OF TEACHERS

___ INTEGRATION OF STUDENTS FROM DIFFERENT RACES OR BACKGROUNDS

___ OTHER_____

4. Listed below is a series of statements that may or may not characterize your school. Please read each statement carefully and then indicate whether in your experience it characterizes your school.

STATEMENT	DOES THIS STATEMENT CHARACTERIZE YOUR SCHOOL?			
	Yes	Generally Yes	Generally No	No
a. Teachers feel free to call on other teachers for help in solving their problems.	☐	☐	☐	☐
b. There is general agreement among teachers about the way the school should be run.	☐	☐	☐	☐
c. Experienced teachers accept new or younger teachers as colleagues.	☐	☐	☐	☐
d. Teachers cooperate with each other to achieve common personal and professional goals.	☐	☐	☐	☐
e. Teachers try to aviod creating problems for each other.	☐	☐	☐	☐
f. Teachers feel free to call on administrators for help in solving problems.	☐	☐	☐	☐
g. Teachers visit other classrooms in the school to get new ideas.	☐	☐	☐	☐
h. Teachers work with staff from other schools to solve problems.	☐	☐	☐	☐
i. Teachers work with staff from central office to solve problems.	☐	☐	☐	☐

STATEMENT	DOES THIS STATEMENT CHARACTERIZE YOUR SCHOOL?			
	Yes	Generally Yes	Generally No	No
j. Teachers work with staff from agencies outside of the district to solve problems.	☐	☐	☐	☐
k. The principal consults with staff about instructional matters.	☐	☐	☐	☐
l. The principal consults with staff about administrative matters that concern teachers.	☐	☐	☐	☐
m. The people in this community respect their teachers and treat them as professionals.	☐	☐	☐	☐
n. The people in this community appreciate the schools and what they are doing.	☐	☐	☐	☐
o. The people in this community make the teachers feel as if they are a real part of the community.	☐	☐	☐	☐

5. Some of the different kinds of meetings that are conducted in a school are listed below.

   Please indicate how often each kind of meeting is held typically in this school.

KIND OF MEETING	HOW OFTEN ARE MEETINGS HELD?					
	Never	1 or 2 Times A Year	3 to 5 Times A Year	Monthly	Twice A Month	Weekly
a. School-wide staff meeting	☐	☐	☐	☐	☐	☐
b. Department or grade level meeting	☐	☐	☐	☐	☐	☐
c. Meeting of department or grade level heads	☐	☐	☐	☐	☐	☐
d. Meetings with parents or community groups	☐	☐	☐	☐	☐	☐
e. Other (specify) _____ _____	☐	☐	☐	☐	☐	☐

6. For each kind of meeting that you attend, indicate the percent of time that is typically spent for different purposes. Each row should add to 100%.

KIND OF MEETING	HOW MUCH TIME IS ALLOCATED TO				
	Presenting Reports, Policies, Announcements	Discussing Reports, Policies, Announcements	Other Discussion	Total	I Do Not Attend
a. School-wide staff meeting	_____	_____	_____	100%	_
b. Department or grade level meeting	_____	_____	_____	100%	_
c. Meeting of department or grade level heads	_____	_____	_____	100%	_
d. Meetings with parents or community groups	_____	_____	_____	100%	_
e. Other (specify) _____ _____	_____	_____	_____	100%	_

7. For each kind of meeting that you attend, indicate how many people typically participate in whatever discussion takes place.

KIND OF MEETING	HOW MANY PEOPLE PARTICIPATE?		
	Less than 1/3 of the group	1/3 to 2/3 of the group	More than 2/3 of the group
a. School-wide staff meeting	☐	☐	☐
b. Department or grade level meeting	☐	☐	☐
c. Meeting of department or grade level heads	☐	☐	☐
d. Meetings with parents or community groups	☐	☐	☐
e. Other (specify) _____ _____	☐	☐	☐

8. For each kind of meeting that you attend, indicate how often discussions lead to a decision, either during the meeting or shortly afterwards.

KIND OF MEETING	HOW OFTEN ARE DECISIONS REACHED?			
	Usually	Some-times	Rarely	Never
a. School-wide staff meetings	☐	☐	☐	☐
b. Department or grade level meeting	☐	☐	☐	☐
c. Meeting of department or grade level heads	☐	☐	☐	☐
d. Meetings with parents or community groups	☐	☐	☐	☐
e. Other (specify)_____ _____	☐	☐	☐	☐

9. For each kind of meeting that <u>you</u> attend, indicate how often decisions reached are actually carried out.

KIND OF MEETING	HOW OFTEN ARE DECISIONS CARRIED OUT?			
	Usually	Some-times	Rarely	Never
a. School-wide staff meeting	☐	☐	☐	☐
b. Department or grade level meeting	☐	☐	☐	☐
c. Meeting of department or grade level heads	☐	☐	☐	☐
d. Meetings with parents or community groups	☐	☐	☐	☐
e. Other (specify)_____ _____	☐	☐	☐	☐

10. During a typical school year, many decisions must be made. Not all people influence any particular decision, and the degree of influence of different persons generally varies with the practices being decided upon. Please indicate, in your opinion, the degree of influence each of the persons listed below has on the following decisions.

Please insert the appropriate code number on each line:

0 = Usually has no influence

1 = Usually has minor influence

2 = Usually has moderate influence

3 = Usually has decisive influence

DECISIONS	PERSON				
	School Board	Central Office	Principal	Teachers as a Group	Individual Teachers
a. Selecting required texts and other materials	___	___	___	___	___
b. Establishing the objectives for each course	___	___	___	___	___
c. Determining daily lesson plans and activities	___	___	___	___	___
d. Adding or dropping courses	___	___	___	___	___
e. Determining how discretionary funds will be spent	___	___	___	___	___
f. Hiring new teachers	___	___	___	___	___
g. Deciding whether to renew a teacher's contract	___	___	___	___	___
h. Making specific faculty grade level and course assignments	___	___	___	___	___
i. Assigning extra duties	___	___	___	___	___
j. Establishing salary schedules	___	___	___	___	___
k. Identifying types of educational innovations to be adopted	___	___	___	___	___
l. Working out details for implementing these innovations	___	___	___	___	___

11. Your school is participating with Research for Better Schools and other agencies in a project to improve a part of the school's instructional program.

Do you think that this effort is a good idea?

- ☐ Yes
- ☐ Generally Yes
- ☐ Generally No
- ☐ No
- ☐ I Don't Know

12. In the past two years, how many workshops or staff development sessions have you attended?

_____

13. Will you please list the main purposes of the three workshops or staff development sessions that you attended most recently?

a. _____

b. _____

c. _____

14. Please list the formal, job related courses (e.g., college courses) you have taken in the past two years, if any.

a. _____

b. _____

c. _____

d. _____

e. _____

15. Please write in the name of the school and district in which you work.

School: _____

District: _____

16. Please indicate by checking the appropriate box below, whether you are a teacher or have another assignment.
If you have more than one assignment (e.g., teaching and counseling) please check all boxes that are appropriate.

☐ I am a Teacher

☐ I am a Counselor

☐ I am a Librarian

☐ Other, please specify _____

_____

IF YOU ARE NOT A TEACHER, YOU MAY SKIP THE REMAINING QUESTIONS.

17. Listed below is a series of areas in which teachers may or may not work with other people. For each area, please indicate whom, if anyone, you usually work with. *You may check more than one person.*

AREA	WHO DO YOU WORK WITH?					
	Teachers in my department or grade level	Other teachers in school	Principal	Counselor or other school specialist	Curriculum coordinator or other district specialist	No one, I usually work alone
a. Selection of objectives for your class	☐	☐	☐	☐	☐	☐
b. Selection of materials to use in your classroom	☐	☐	☐	☐	☐	☐
c. Selection of mode of presentation (lecture, discussion) to use in your classroom	☐	☐	☐	☐	☐	☐
d. Sequencing of activities in your classroom	☐	☐	☐	☐	☐	☐
e. Development of course of action for a student who is difficult to control	☐	☐	☐	☐	☐	☐
f. Development of course of action for a student who has special learning needs	☐	☐	☐	☐	☐	☐

8. Please indicate the materials that you usually refer to when working in each of the areas listed below.
You may check more than one type of material.

AREA	WHICH MATERIALS DO YOU USE?				
	Textbook	Curriculum Guide	District Policy	School Policy or Handbook	Other (specify)
a. Selection of objectives for your class	☐	☐	☐	☐	_____
b. Selection of materials to use in your classroom	☐	☐	☐	☐	_____
c. Selection of mode of presentation (lecture, discussion) to use in your classroom	☐	☐	☐	☐	_____
d. Sequencing of activities in your classroom	☐	☐	☐	☐	_____
e. Development of course of action for a student who is difficult to control	☐	☐	☐	☐	_____
f. Development of course of action for a student who has special learning needs	☐	☐	☐	☐	_____

19. Are you a generalist teacher? That is, do you teach all core subjects to your class?

☐ Yes

☐ No

20. If you are <u>not</u> a generalist teacher, please indicate the subjects you teach.

_____

_____

_____

21. Please indicate the grades that you teach presently by circling the appropriate numbers below.

K 1 2 3 4 5 6 7 8 9 10 11 12

THANK YOU FOR YOUR ASSISTANCE.